

Service
Service
Service

Service Manual

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15MF227B/27
15MF237S/27
19MF337B/27
19MD357B/27
19PFL5402D/27
19PFL5422D/27
19PFL5622D/27

Part 2**103-206**

26MF337B/27
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1. Technical Specifications and Connections and Chassis Overview

Index of this chapter:

- 1.1 Technical Specifications
- 1.2 Connections
- 1.3 Chassis Overview

Notes:

- Figures below can deviate slightly from the actual situation, due to the different set executions.
- Specifications are indicative (subject to change).

1.1 Technical Specifications

1.1.1 Technical Specifications

Display type	: LCD
Screen size	: 15"(38cm), 16:9 : 19"(48cm), 16:9
Resolution (HxV pixels)	: 1024(H) x 768(V)(15",19MF&19MD) : 1440(H) x 900(V)(19PFL)
Contrast ratio	: 500:1(15") : 850:1(19")
Light output (cd/m2)	: >200(15") : 300(19MF&19MD) : >230(19PFL)
Response time (ms)	: 8ms(Typ.) (15") : 5ms(Typ.) (19")
Viewing angle (HxV degrees)	: -70°~70°(H), -60°~65°(V)(Typ.) (15") : -85°~ 85°(H), -80°~ 80°(V)(Typ.) (19")
Tuning system	: PLL
TV Color systems	: NTSC M
Video playback	: NTSC M
Cable	: NTSC /ATSC(8VSB)
Tuner bands	: Free QAM(64/256) : FQD1236/F H-5 ATSC/CLEAR QAM
Supported video formats	: TAEH6-9P31FR3 : 640 x 480 @60p : 720 x 240 @60p : 720 x 480 @60i : 720 x 480 @60p : 1280 x 720 @60p : 1920 x 1080 @60i
Supported computer formats	: 640x350 @ 60Hz : 640x480 @ 60Hz : 800x600 @ 60Hz : 1024x768 @ 60Hz : 1360x768 @ 60Hz(19") : 1440x900 @ 60Hz(19")

1.1.2 Sound

Sound systems	: Stereo / Virtual Surround
Maximum power	: 2 x 3W(15",19MF&19MD) : 2 x 5W(19PFL)

1.1.3 Miscellaneous

Power Supply	
-AC/DC Power adapter	: +16V DC/2.812A(3.125A) (100~240V) (15") : 100~240V(19")
-Power consumption	: 35W (Typical)(15") : 50W(Typical) (19")
-Power cord length	: 1.8m
-Power cord type	: 3 lead with earth plug (US type)
-Power indicator	: LED(On: Green, Standby: Amber)
-Auto power saving	: EPA
-Stand-by (W)	: <1W
Horizontal scan	
-Horizontal	: 30 - 49KHz(15") : 30 - 56KHz(19")
-Vertical	: 56 - 62 Hz
Dimensions (WxHxD in mm)	: 327 x 254 x 12.0(15") : 427.2 x 277.4 x 17.0(19")

Ambient conditions:

- Temperature :0°C to 40°C
- Humidity :10 to 90%(non-condensing)

1.2 Connections

1.2.1 Signal Connector

1. Earphone (not use on 20")
2. Tuner (NTSC / ATSC / free QAM)
3. AV1 YPbPr (RCA connectors)
4. AV1 Audio L/R (RCA connectors for YPbPr)
5. AV2 CVBS & S-Video
6. AV2 Audio R/L input (RCA connectors for S-Video & CVBS)
7. SPDIF output (RCA connector)
8. PC Audio line in
9. D-Sub VGA in
10. HDMI
11. Rx/Tx for ISP factory alignment
12. DC mains in(15") , AC inlet(19")

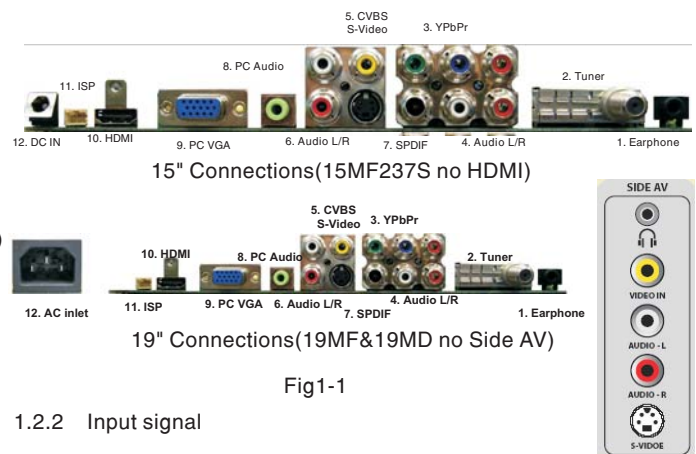


Fig1-1

1.2.2 Input signal

1.2.2.1 Signal type

D-sub 15 pins:

PC mode.

- Impedance: 75Ω.
- Level: 700mV
- Sync: TTL level, separate sync, + or - polarity.

PC-stereo line in (For PC)

- Audio: Impedance > 10 kΩ.
- Input Level: 500 mVrms

TV RF input system

- Aerial or cable, NTSC/ATSC (8VSB) /Free QAM (64/256)

TV RF input level

- 10mV (80dBuV) typical, 30dBuV ~ 100dBuV receiving capability, terminated with input impedance of 75Ω.

RCA A/V, CVBS and audio R+L input

- Support NTSC colour system, 480i/60Hz.
- CVBS: 75Ω impedance.
- DC coupled signals 1Vpp (Sync:300mV, video:700mV)
- Audio: Impedance > 10 kΩ.
- Input Level: 500 mVrms
- ESD-protected: 15 kV

S-video , (audio share with CVBS)

- Support NTSC colour system, 480i/60Hz.
- Y: 1000mVpp, C: 300mVpp, terminated with input impedance of 75Ω.

HEADPHONE

- Peripherals : Earphones with impedance between 8 - 600Ω
- Features :When headphone plug is connected, loudspeaker sound is muted.
- Volume control: with the loudspeaker volume.
- Connector type : 3.5 mm stereo Jack, with switch

- Specifications : - Output: $32\Omega > 10\text{ mW}$
- Sound is the same as from the loudspeakers.
- ESD-protected : 15 kV

YPbPr and Audio L + R input

- Support NTSC colour system SDTV and HDTV, including 480i/60Hz, 480p/60Hz, 720p/60Hz and 1080i/60Hz.
- Y: 1000mVpp, PbPr: 350mVpp, terminated with input impedance of 75Ω .
- Connector type: RCA connectors
- Audio: Impedance $> 10\text{ k}\Omega$.
Input Level: 500 mVrms

HDMI (High Definition Multimedia Interface)

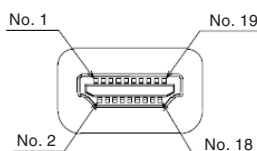
- support 480i /480p , 720p , 1080i format with HDCP
- Digital interface with 4 channels TMDS signal

SPDIF Output (Sony Philips Digital Interface Format)

- Level: - 0.5V~1.0V square wave

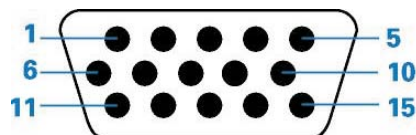
HDMI Pin assignment

Type A Connector



PIN No.	SIGNAL
1	TMDS Data2+
2	TMDS Data2 shield
3	TMDS Data2-
4	TMDS Data1+
5	TMDS Data1 shield
6	TMDS Data1-
7	TMDS Data0+
8	TMDS Data0 shield
9	TMDS Data0-
10	TMDS Clock+
11	TMDS Clock Shield
12	TMDS Clock-
13	CEC
14	Reserved (N.C. on device)
15	SCL
16	SDA
17	DDC/CEC Ground
18	+5V Power
19	Hot Plug Detect

D-sub Pin assignment



PIN No.	SIGNAL b(PC)
1	Red
2	Green
3	Blue
4	NC
5	GND
6	Red GND
7	Green GND
8	Blue GND
9	+5V (Supply from PC)
10	Sync GND
11	NC
12	SDA
13	H-sync
14	V-sync
15	SCL

1.3 Chassis Overview

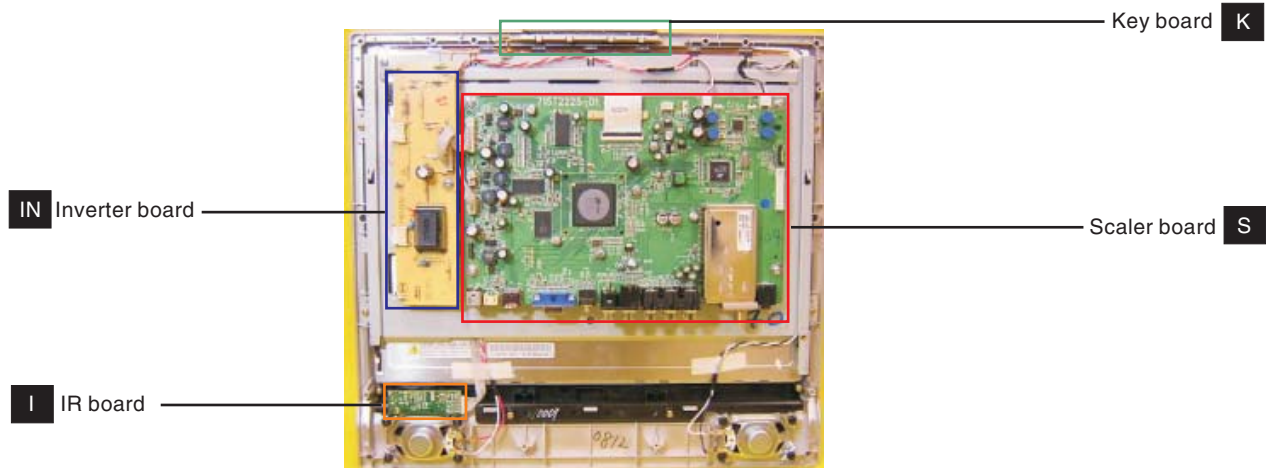


Fig. 1-2 CBA locations (15-inch model)

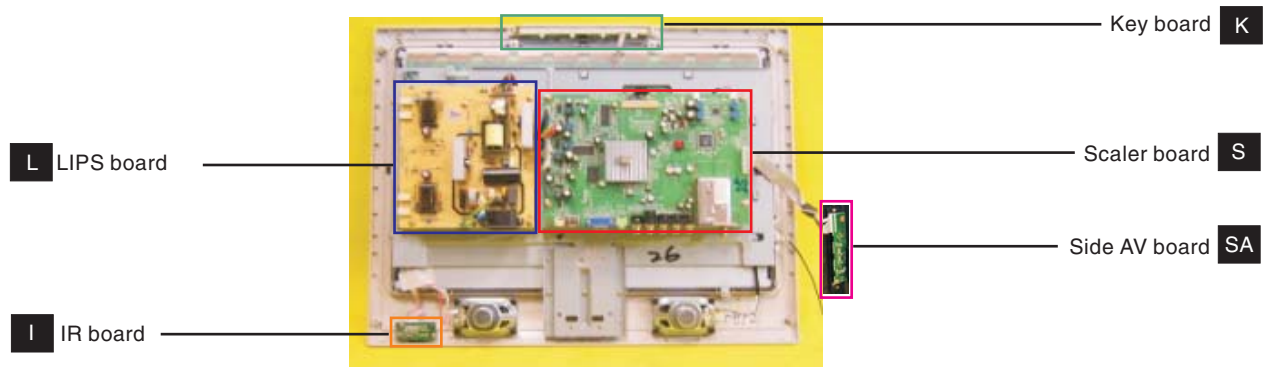


Fig. 1-3 CBA locations (19PFL5402D model)

2. Safety Instructions, Warnings, and Notes

Index of this chapter:

- 2.1 Safety Instructions
- 2.2 Warnings
- 2.3 Notes

2.1 Safety Instructions

Safety regulations require the following **during** a repair:

- Connect the set to the Mains/AC Power via an isolation transformer (> 800 VA).
- Replace safety components, indicated by the symbol , only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the Mains/AC Power lead for external damage.
- Check the strain relief of the Mains/AC Power cord for proper function.
- Check the electrical DC resistance between the Mains/AC Power plug and the secondary side (only for sets that have a Mains/AC Power isolated power supply):
 1. Unplug the Mains/AC Power cord and connect a wire between the two pins of the Mains/AC Power plug.
 2. Set the Mains/AC Power switch to the "ON" position (keep the Mains/AC Power cord unplugged!).
 3. Measure the resistance value between the pins of the Mains/AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
 4. Switch "OFF" the set, and remove the wire between the two pins of the Mains/AC Power plug.
- Check the cabinet for defects, to prevent touching of any inner parts by the customer.

2.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ) . Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential. Available ESD protection equipment:
 - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
 - Wristband tester 4822 344 13999.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched "ON".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.3 Notes

2.3.1 General

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground () , or hot ground () , depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative. Measure them in the

Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz for PAL, or 61.25 MHz for NTSC (channel 3).

- Where necessary, measure the waveforms and voltages with () and without () aerial signal. Measure the voltages in the power supply section both in normal operation () and in stand-by () . These values are indicated by means of the appropriate symbols.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
- Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the "double-D symbol", are trademarks of Dolby Laboratories.

2.3.2 Schematic Notes

- All resistor values are in ohms, and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are given in micro-farads ($\mu = \times 10^{-6}$), nano-farads ($n = \times 10^{-9}$), or pico-farads ($p = \times 10^{-12}$).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed in the Spare Parts List. Therefore, always check this list when there is any doubt.

2.3.3 Lead-free Solder

Philips CE is producing lead-free sets (PBF) from 1.1.2005 onwards.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 5 and 6 refer to the production year, digits 7 and 8 refer to production week (in example below it is 2006 week 17).



E_06532_024.eps
130606

Figure 2-1 Serial number example

Regardless of the special lead-free logo (which is not always indicated), one must treat all sets from this date onwards according to the rules as described below.



Figure 2-2 Lead-free logo

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment. In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able:
 - To reach a solder-tip temperature of at least 400°C.
 - To stabilise the adjusted temperature at the solder-tip.
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature of around 360°C - 380°C is reached and stabilised at the solder joint. Heating time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C, otherwise wear-out of tips will increase drastically and flux-fluid will be destroyed. To avoid wear-out of tips, switch "off" unused equipment or reduce heat.
- Mix of lead-free soldering tin/parts with leaded soldering tin/parts is possible but PHILIPS recommends strongly to **avoid** mixed regimes. If this cannot be avoided, carefully clear the solder-joint from old tin and re-solder with new tin.
- Use only original spare-parts listed in the Service-Manuals. Not listed standard material (commodities) has to be purchased at external companies.
- For sets produced before 1.1.2005, containing leaded soldering tin and components, all needed spare parts will be available till the end of the service period. For the repair of such sets nothing changes.

In case of doubt whether the board is lead-free or not (or with mixed technologies), you can use the following method:

- Always use the highest temperature to solder, when using SAC305 (see also instructions below).
- De-solder thoroughly (clean solder joints to avoid mix of two alloys).

2.3.4 Alternative BOM identification

In September 2003, Philips CE introduced a change in the way the serial number (or production number, see Figure 2-1) is composed. From this date on, the **third digit** in the serial number (example: AG2B0335000001) indicates the number of

the alternative BOM (Bill of Materials used for producing the specific model of TV set). It is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different O.E.M.s.

By looking at the third digit of the serial number, the service technician can see if there is more than one type of B.O.M. used in the production of the TV set he is working with. He can then consult the At Your Service Web site, where he can type in the Commercial Type Version Number of the TV set (e.g. 28PW9515/12), after which a screen will appear that gives information about the number of alternative B.O.M.s used. If the third digit of the serial number contains the number 1 (example: AG1B0335000001), then there is only one B.O.M. version of the TV set on the market. If the third digit is a 2 (example: AG2B0335000001), then there are two different B.O.M.s. Information about this is important for ordering the correct spare parts!

For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26 = 35 different B.O.M.s can be indicated by the third digit of the serial number.

2.3.5 Board Level Repair (BLR) or Component Level Repair (CLR)

If a board is defective, consult your repair procedure to decide if the board has to be exchanged or if it should be repaired on component level.

If your repair procedure says the board should be exchanged completely, do not solder on the defective board. Otherwise, it cannot be returned to the O.E.M. supplier for back charging!

2.3.6 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages.** While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3. Directions for Use

You can download this information from the following websites:

<http://www.philips.com/support>

<http://www.p4c.philips.com>

Philips Digital UI-TV/AV1/AV2/Side/HDMI				
OSD Layer 1	2	3	4	5
Picture	Smart Picture	Personal Rich Natural Soft Power Saver		
	Contrast	slider		
	Brightness	slider		
	Color	slider		
	Sharpness	slider		
	Color temperature	Normal Warm Cool		
	Tint	slider		
	Noise Reduction	slider		
	Dynamic Contrast	OFF Medium Maximum		
	Picture format	Automatic Super zoom 4:3 Movie expand 14:9 Movie expand 16:9 16:9 subtitle Wide screen		
Sound	Smart sound	Personal Speech Movies	EQUALIZER EQUALIZER EQUALIZER	
	Sound mode	Mono Stereo Virtual Surround		
	Alternate audio	Main SAP		
	Digital Audio Language	Use toggle method to navigate supported languages		
	AVL	Off On		
Features	Closed captions	Off On On during mute		
	Caption service	CC-1 CC-2 CC-3 CC-4 T-1 T-2 T-3 T-4		
	Digital caption service	CS-1 CS-2 CS-3 CS-4 CS-5 CS-6		

3. Directions for Use

	Digital caption options	Reset to default	Reset to default	
		Size	Default Small Standard Large	
		Style	Default Monospaced serif Serif Monospaced sans serif Sans serif Casual Cursive Small caps	
		Text	Color	Default Black White Red Green Blue Yellow Magenta Cyan
			Opacity	Default Solid Transparent Translucent Flashing
		Background	Color	Default Black White Red Green Blue Yellow Magenta Cyan
			Opacity	Default Solid Transparent Translucent Flashing
	Preferred channels			
	Sleeptimer	slider		
Parental Control	Channel lock			
	TV ratings lock			
	Movie ratings lock			
	Region ratings lock			
	Clear Regions lock			
	Change Pin			
Installation	Language	English Francais Espanol		
	Autoprogram	Antenna Cable	Start now (Analog first then Digital)	
	Source	TV AV1 AV2 HDMI Side DVD PC		
	Clock	Enter Time(Hrs,Mins) AM/PM		
	Weak channel Installation			
	Current Software Info	(Current software Version)		
	Reset AV settings	Start now		
	EXIT	EXIT		

Magnavox Digital UI-PC				
1	2	3	4	5
Picture	Contrast	slider		
	Brightness	slider		
	Color temp	Normal Warm Cool		
	Picture format	Full screen 4:3		
Sound	Smart sound	Personal	Equalizer	
		Speech	Equalizer	
		Movie	Equalizer	
	Virtual surround	On Off		
Installation	Language	English Francais Espanol		
	Source	TV AV1 AV2 HDMI DVD PC		
	Picture Adjustment	Auto adjust		
			Start	
		Manual adjust	Phase Clock Horizontal Vertical	
	Factory reset	No Yes		
EXIT	Exit			

3. Directions for Use

Magnavox Digital UI-DVD				
1	2	3	4	5
Picture	Smart picture	Personal Rich Natural Soft Power Saver		
	Contrast	slider		
	Brightness	slider		
	Color	slider		
	Sharpness	slider		
	Color temperature	Normal Warm Cool		
	Tint	slider		
	Noise Reduction	slider		
	Dynamic Contrast	OFF Medium Maximum		
	Picture format	Automatic Super zoom 4:3 Movie expand 14:9 Movie expand 16:9 16:9 subtitle Wide screen		
Sound	Smart sound	Personal Speech Movies	EQUALIZER EQUALIZER EQUALIZER	
	Virtual Surround	On Off		
Parental Control	Movie ratings lock			
	Change Pin			
Installation	Language	English Francais Espanol		
	Source	TV AV1 AV2 HDMI DVD PC		
	Reset AV settings	Start now		
EXIT	Exit			

4. Mechanical Instructions

Index of this chapter:

4.1 Assy/Panel Removal

4.2 Set Re-assembly

4.1 Assy/Panel Removal

Notes: Please put your machine on soft material to avoid to scrape panel when you disassemble it.

Front view



Fig.1

Back view



Fig.2

Step 1. Remove the stand.

Remove the two screws as Fig.2.

Step 2. Remove the Back cover and Main shield assy as Fig.3~5.

a. Remove the 6 screws on the bottom side as Fig.3.

b. Remove the back cover as Fig.4.

c. Remove the 5 screws as Fig.5, then remove the Main shield assy.

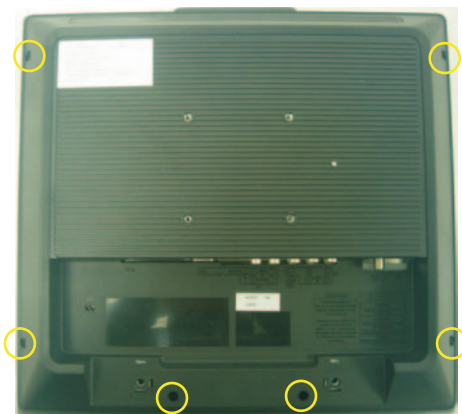


Fig.3

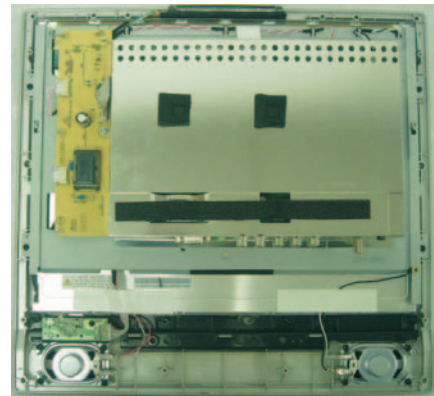


Fig.4

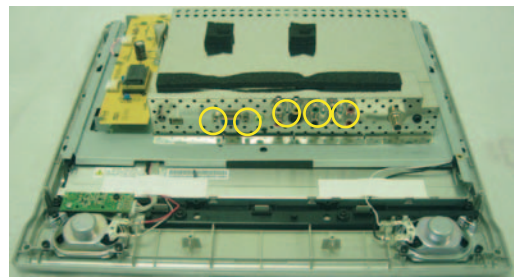


Fig.5

Step 3. Remove the Scaler, Inverter, IR, Key board.

Remove the 6 screws and disconnect the 10 cables as Fig.6.

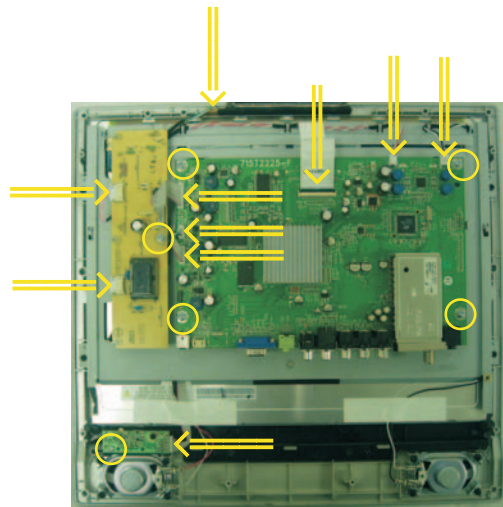


Fig.6

Step 4. Remove the speakers and the Bezel assy as Fig.7~Fig.8

a. Remove the 8 screws as Fig.7.

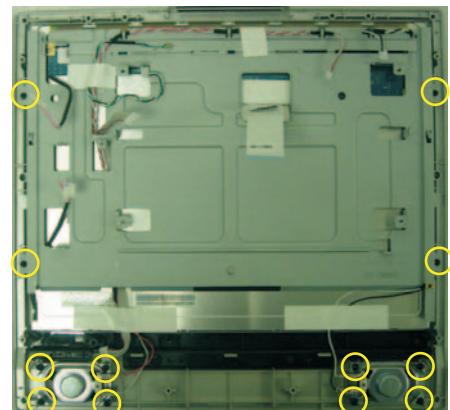


Fig.7

4. Mechanical Instructions

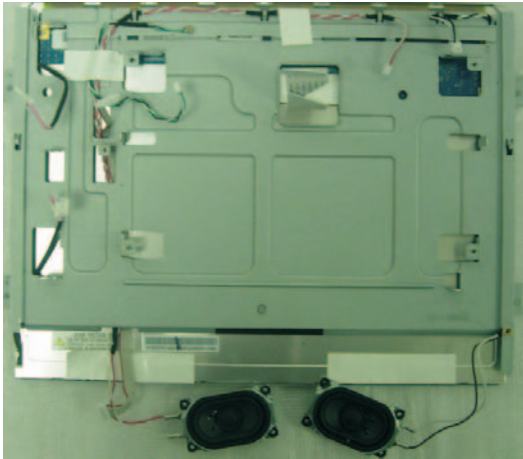


Fig.8

Step 5. Remove MAIN Frame ASSY as Fig.9.

Remove the 4 screws as Fig.9.

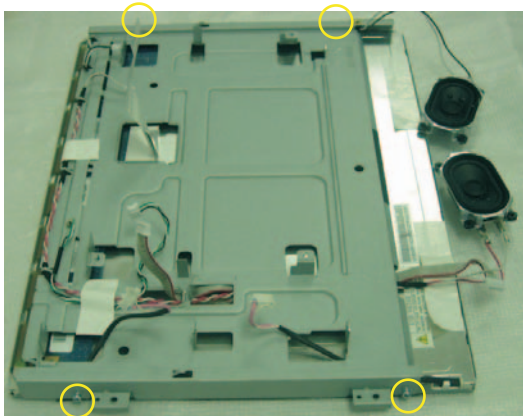


Fig.9



Fig. 10

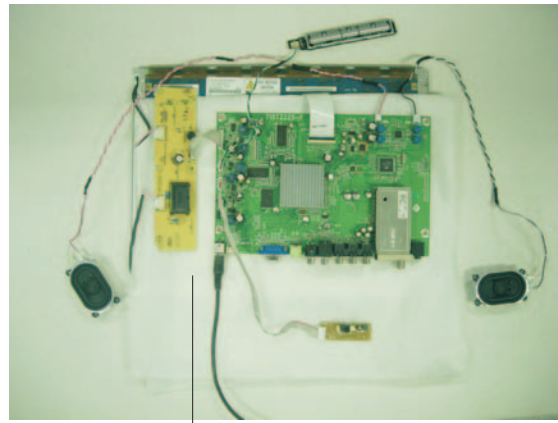


Fig.11

Insulation material

Service position

Notes: Please add insulation material between board and panel to avoid short circuit.

4.2 Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Notes:

- While re-assembling, make sure that all cables are placed and connected in their original position.
- Pay special attention not to damage the EMC foams at the SSB shielding. Check that EMC foams are put correctly on their places.

In warranty, it is not allowed to disassembly the LCD panel, even the backlight unit defect.

Out of warranty, the replacment of backlight unit is a correct way when the defect is cused by backlight (CCFL,Lamp).

5. Service Modes, Error Codes and Fault Finding

index of this chapter:

5.1 CSM

5.2 Factory Mode

5.3 Repair Flow Chart

5.1 CSM

It can display CSM windows message when press 1-2 3-6 5-4 on the button (RC) remote control in normal operation mode.
The following information is displayed on screen:

CSM Item	Contents	Remark
1: Set Type	15MF237D/27	Project name
2: Production code	BZ000651123456	14 digit production-code(serial number)
3: SW-naming main-processor	F3 ATSC V0.133.1 070130	SW version(F3:F3 family, ATSC: digital TV, V0.133.1: software version, 070130: software release date)
4: Code 1	FF FF FF FF FF	Error codes in NVM/EEPROM (5 last logged errors)
5: Code 2	FF FF FF FF FF	Error codes in NVM/EEPROM (5 first logged errors)
6: Key (HDCP)	Invalid	HDMI information whether HDCP-key is valid
7: Digital signal quality ATSC		Digital signal level
8: NVM-naming	PANEL_CLAA_15_XP3	Contents per Panel-type

About error code,Please refer to the table below.

Error code	Event
0x01	DDR error
0x02	IIC bus error
0x03	Tuner error
0x04	Demod error

5.2 Factory Mode

It can enter Factory Mode

1. Press "Menu" in normal operation mode to enter OSD.
2. Press "062596+Menu" on the button (RC) remote control in OSD.
3. Press "Menu" again. The screen will appear "FAC" in top right corner.

OSD behavior:

Before press number key change OSD item

Now remove previous function, press number key then press OK will change value

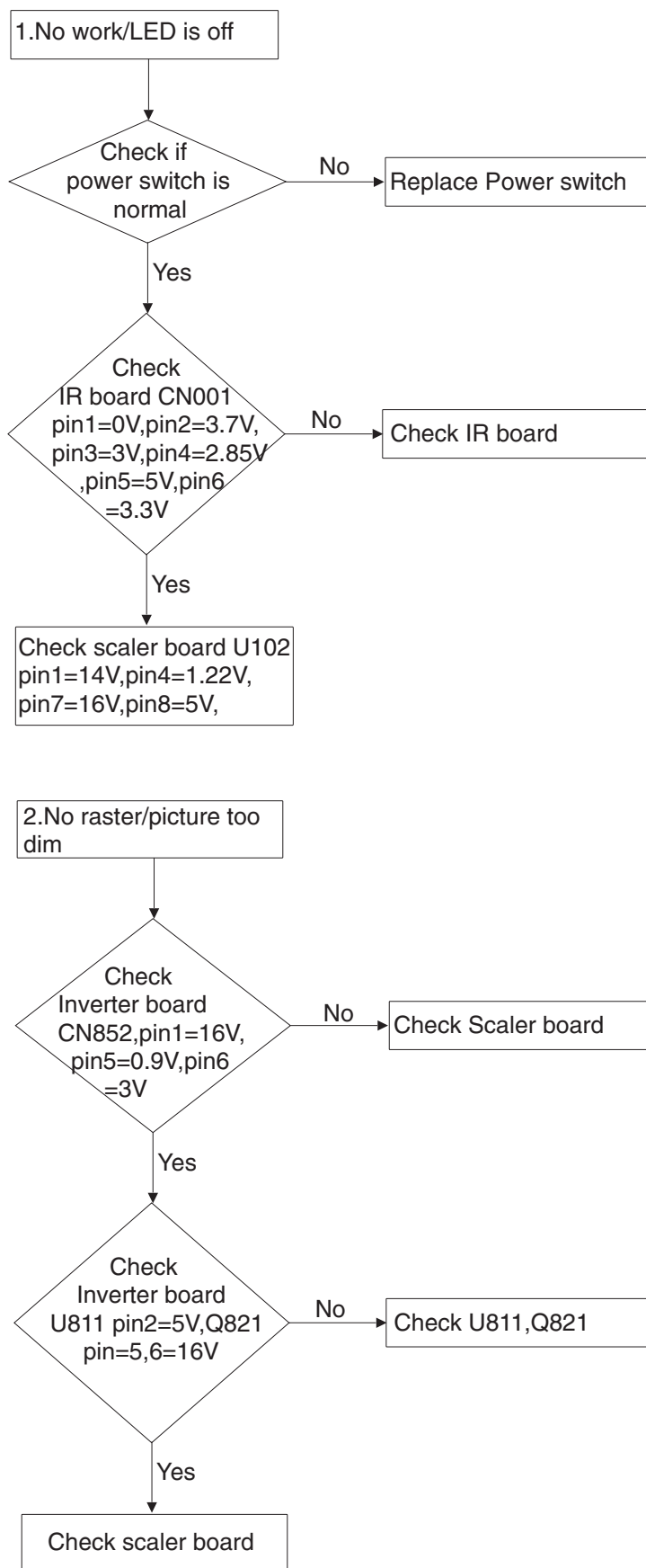
Item	Description	Range	method of operation
//Action Items			
0	Exit Factory		press OK.
1	AutoColor	PC: any pattern has black and white YPbPr:SMPTEbar(color bar), any timing.	press OK. when autocolour, the OSD disappear, when finished. OSD appear.
//Switch Items			
2	VIRGIN Mode		On/Off
3	AGING MODE	turn<On> and no signal input	On/Off
4	COLOR_ENHANCE		On/Off
(values different by VGA and YPbPr) AutoColor changes those items			
5	ADC_GAIN_R	0~255	Press Left and Right to change value
6	ADC_GAIN_G	0~255	
7	ADC_GAIN_B	0~255	
8	ADC_OFFSET_R	0~127	
9	ADC_OFFSET_G	0~127	
10	ADC_OFFSET_B	0~127	
//Color Temperature			
11	CLR_TEMP_R	Back-End Scaler R G B Gain	0~255 Press Left and Right to change value
12	CLR_TEMP_G		0~255
13	CLR_TEMP_B		0~255
//Smart Picture			
14	SP_MODE_3DNR	Except YPbPr 720P above timing	0~5 Press Left and Right to change value
15	SP_MODE_PWM	(when Dynamic contrast Off)	0~255
(values different by AV,DTV,HDMI,YPbPr) Front-End, because each source has the same smart picture setting, for different between each source			
//Smart Picture Default			
16	SP_GAIN_BRI_DTV	Brightness	0~255 Press Left and Right to change value
17	SP_GAIN_BRI_AV		0~255
18	SP_GAIN_BRI_YPBPR		0~255
19	SP_GAIN_BRI_HDMI		0~255
20	SP_GAIN_BRI_VGA		0~255
21	SP_GAIN_CNT_DTV	Contrast	0~255
22	SP_GAIN_CNT_AV		0~255
23	SP_GAIN_CNT_YPBPR		0~255
24	SP_GAIN_CNT_HDMI		0~255
25	SP_GAIN_CNT_VGA		0~255
26	SP_GAIN_TINT_DTV	Color	0~255
27	SP_GAIN_TINT_AV		0~255
28	SP_GAIN_TINT_YPBPR		0~255
29	SP_GAIN_TINT_HDMI		0~255
30	SP_GAIN_CLR_DTV	Color	0~255
31	SP_GAIN_CLR_AV		0~255

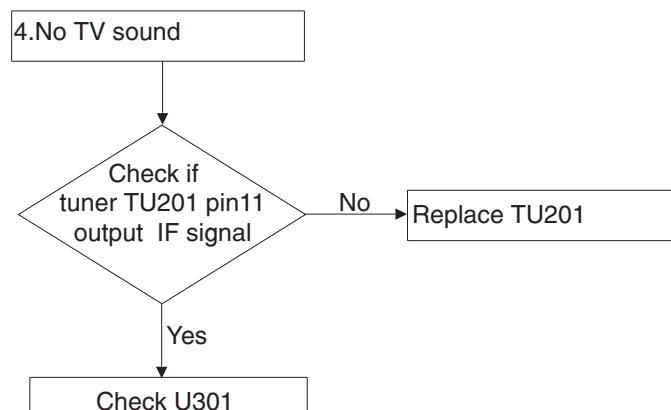
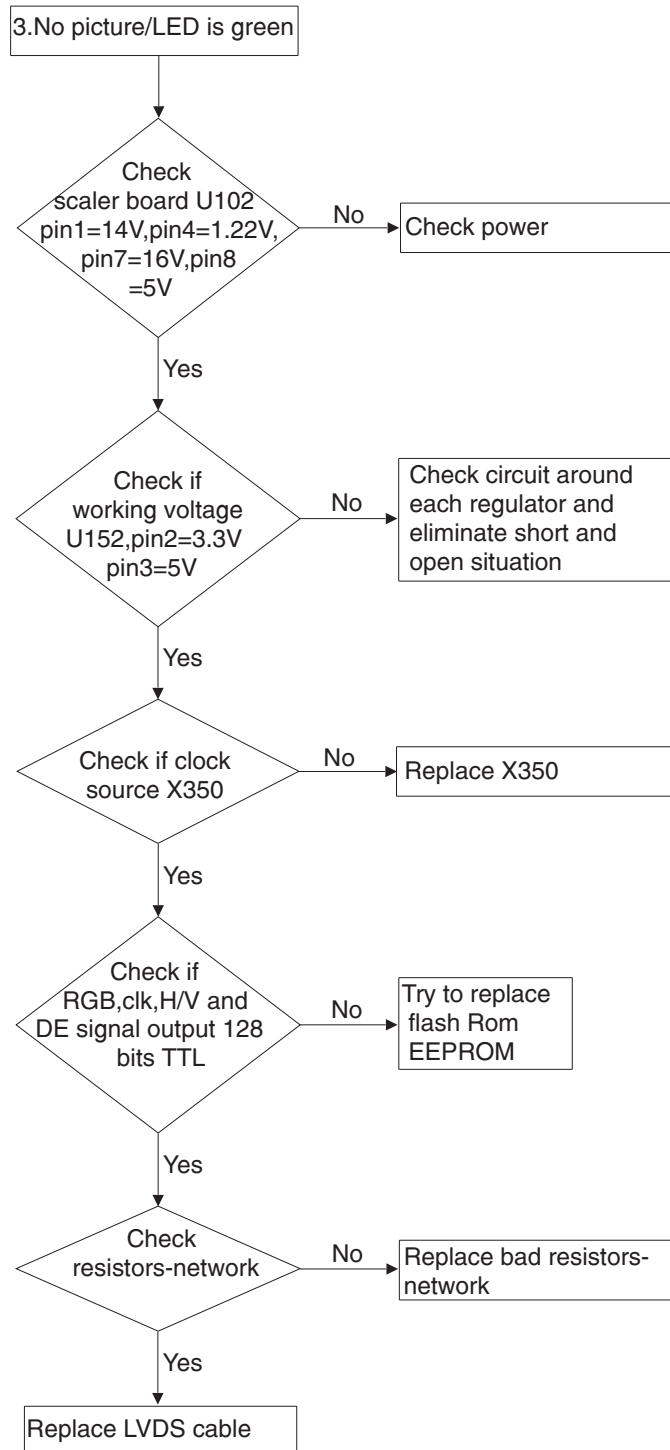
32	SP_GAIN_CLR_YPBPR		0~255	
33	SP_GAIN_CLR_HDMI		0~255	
	//PWM	(when Dynamic contrast On, avoid too dark)		when Dynamic contrast turn Medium , it reference range PWM_NORMAL and PWM_MEDIUM when Dynamic contrast turn Maximun , it reference range PWM_NORMAL and PWM_MAXIMUN
34	VIDEO_PWM_NORMAL		0~255	
35	VIDEO_PWM_MEDIUM		0~255	
36	VIDEO_PWM_MAXIMUN		0~255	
37	VGA_PWM_MIN	to limit PC brightness range	0~255	
38	VGA_PWM_MAX		0~255	
	//YPbPr H/V Position	(value different by each timing)		
39	YPBPR_POS_H			
40	YPBPR_POS_V	interlace no effect, only progressive can be adjusted		
	//Audio			
41	AUD_GAIN_TV	volume different between audio source , for each source volume to be the same	64--64	
42	AUD_GAIN_DTV		64--64	
43	AUD_GAIN_HDMI		64--64	
44	AUD_GAIN_SCART		64--64	
45	AUD_HEADPHONE_VOL		12--64	
46	AUD_BALANCE	amplifier left and right volume	-50~50	Press Left and Right to change value
	//Tuner & Panel Id			
47	TUNER_ID	4 is Philips, 5 is Forward	4,5	
48	PANEL_ID	value the same to CLI command		

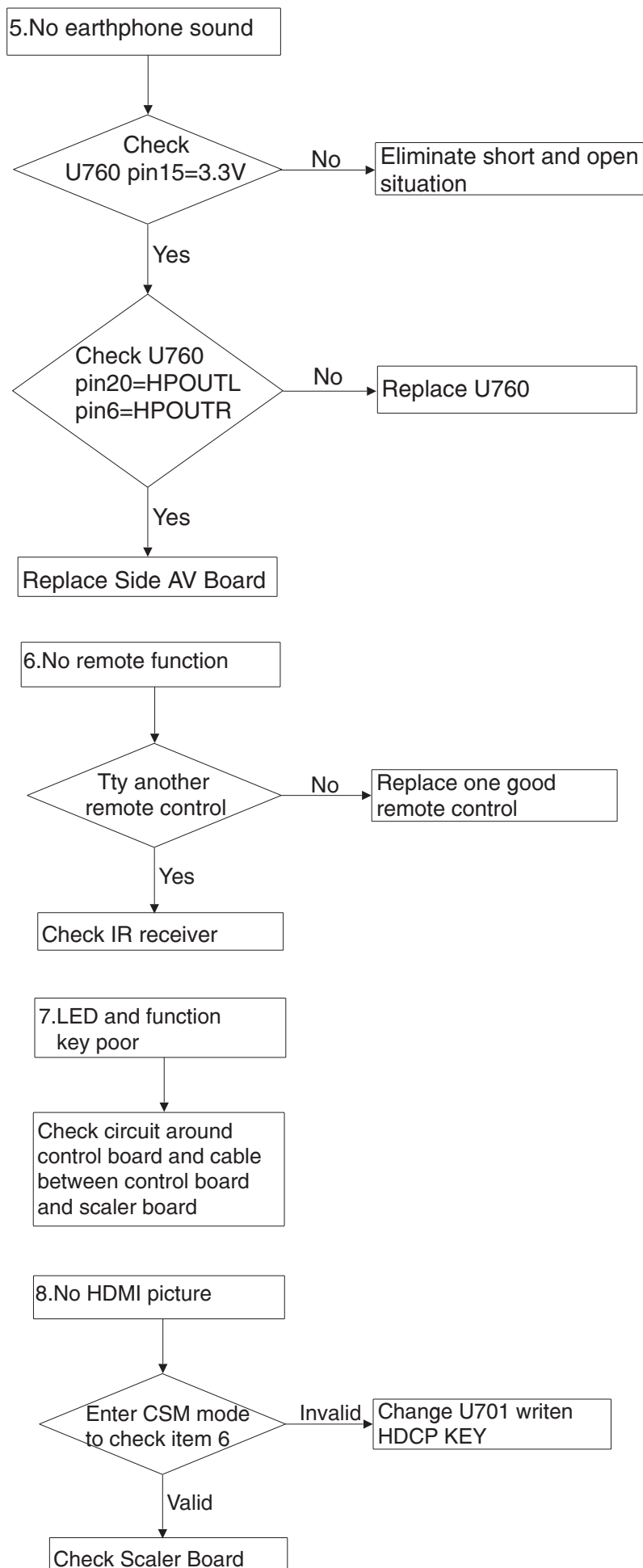
Smart picture control items: (values different by smart picture)

	User Menu OSD:(Back-End)	can be changed when factory mode
	Contrast	
	Brightness	
	Color	
	Sharpness	
	color temperature	
	Tint	
	Noise Reduction	
	Factory menu OSD	can be changed when factory mode
	SP_MODE_PWM (when Dynamic contrast Off)	
	SP_MODE_3DNR (range 0 to 5)	

5.3 Repair Flow Chart





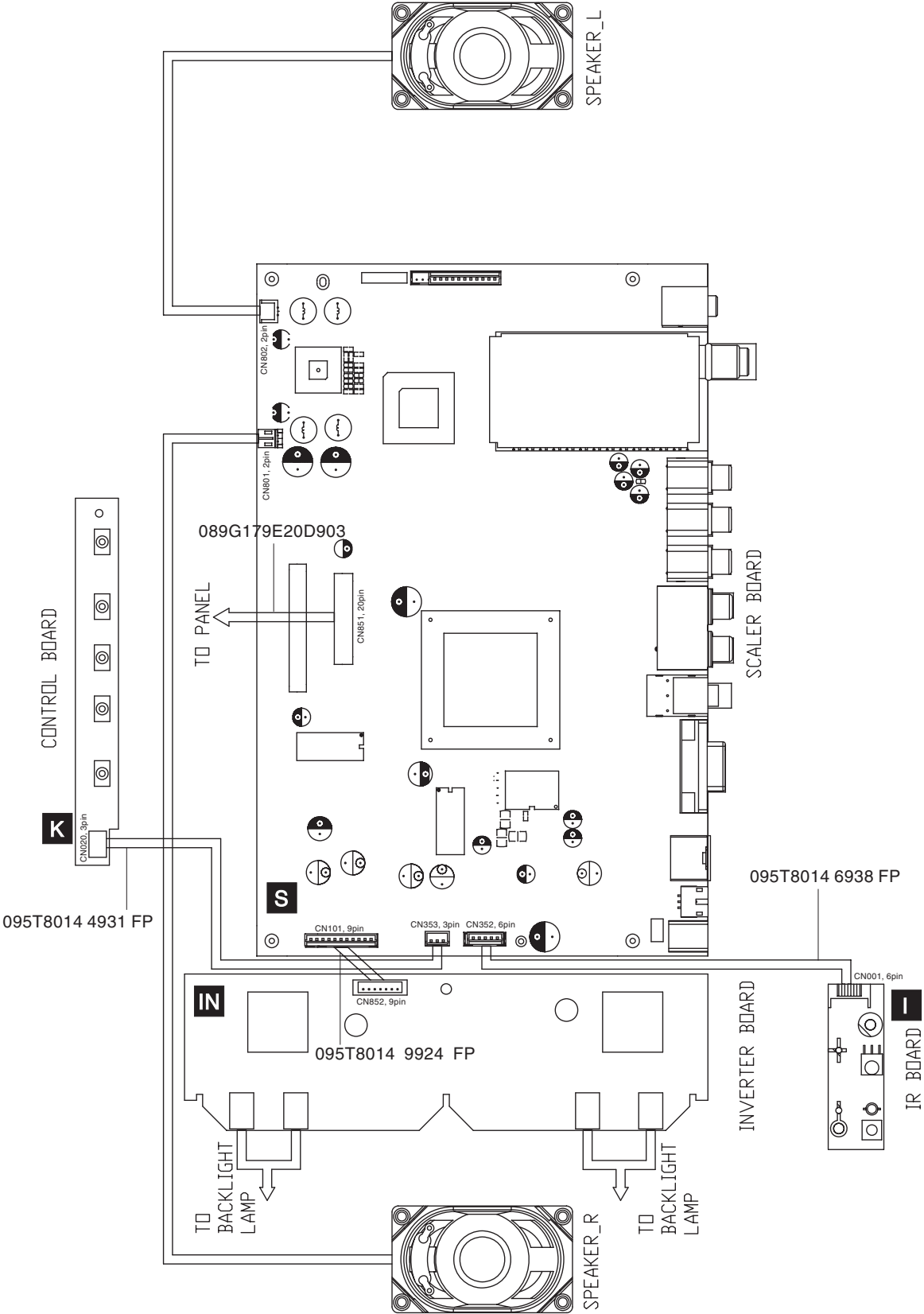


6. Block Diagram

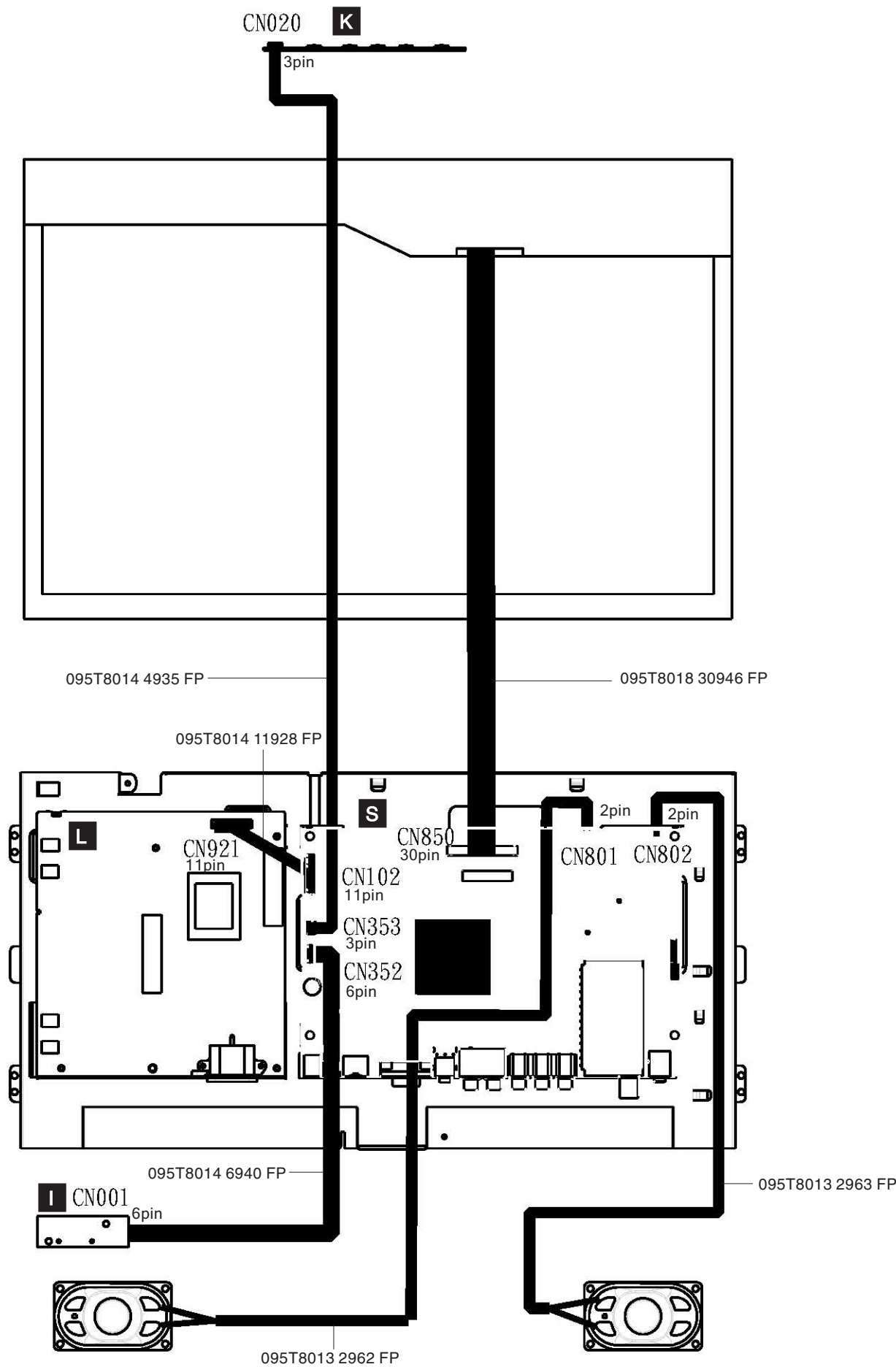
Index of this chapter:
6.1 Wiring Diagram
6.2 Block Diagram

6.1 Wiring Diagram

F3 15" Wiring Diagram

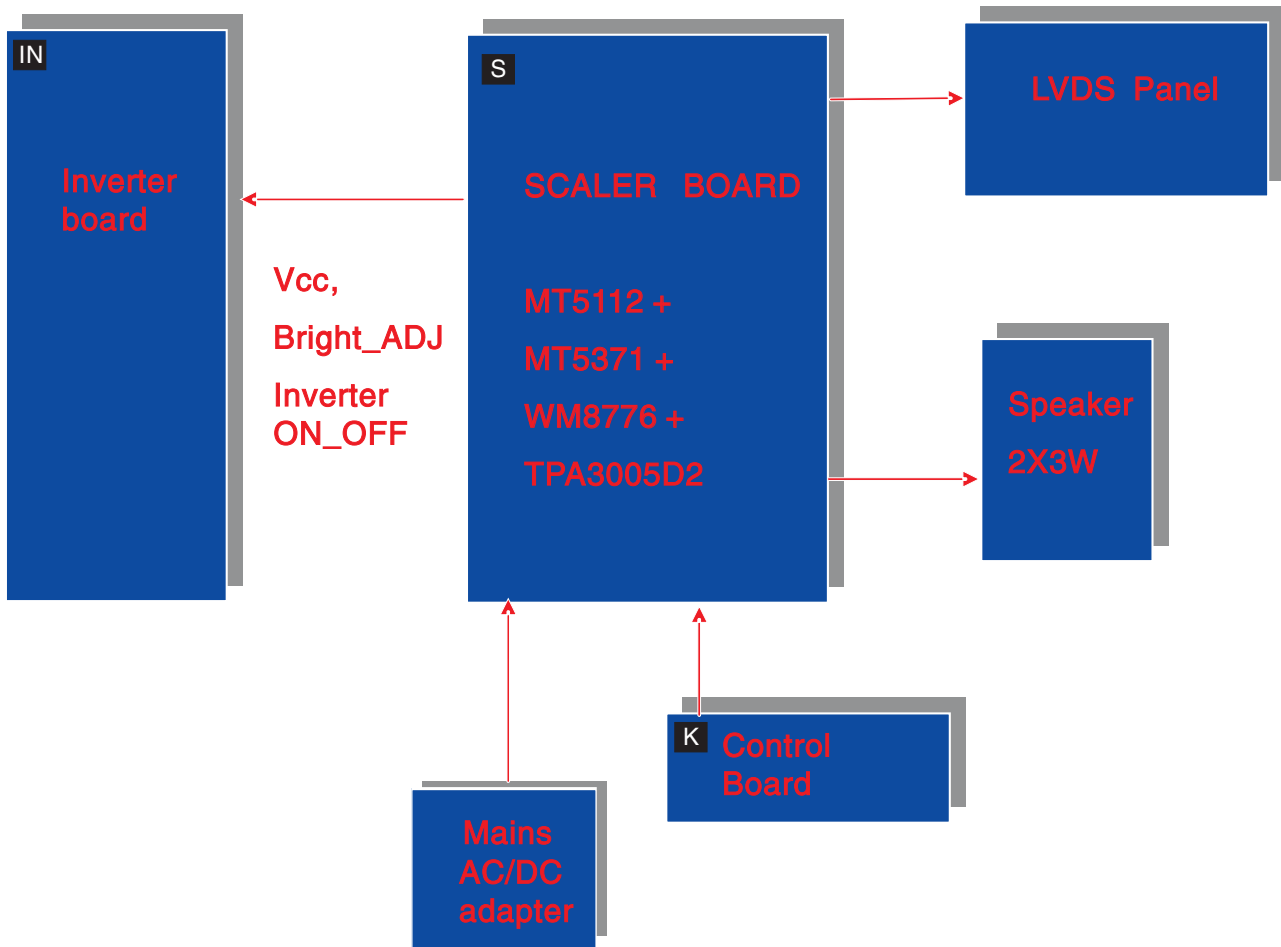


F3 19MF337B/37 Wiring Diagram

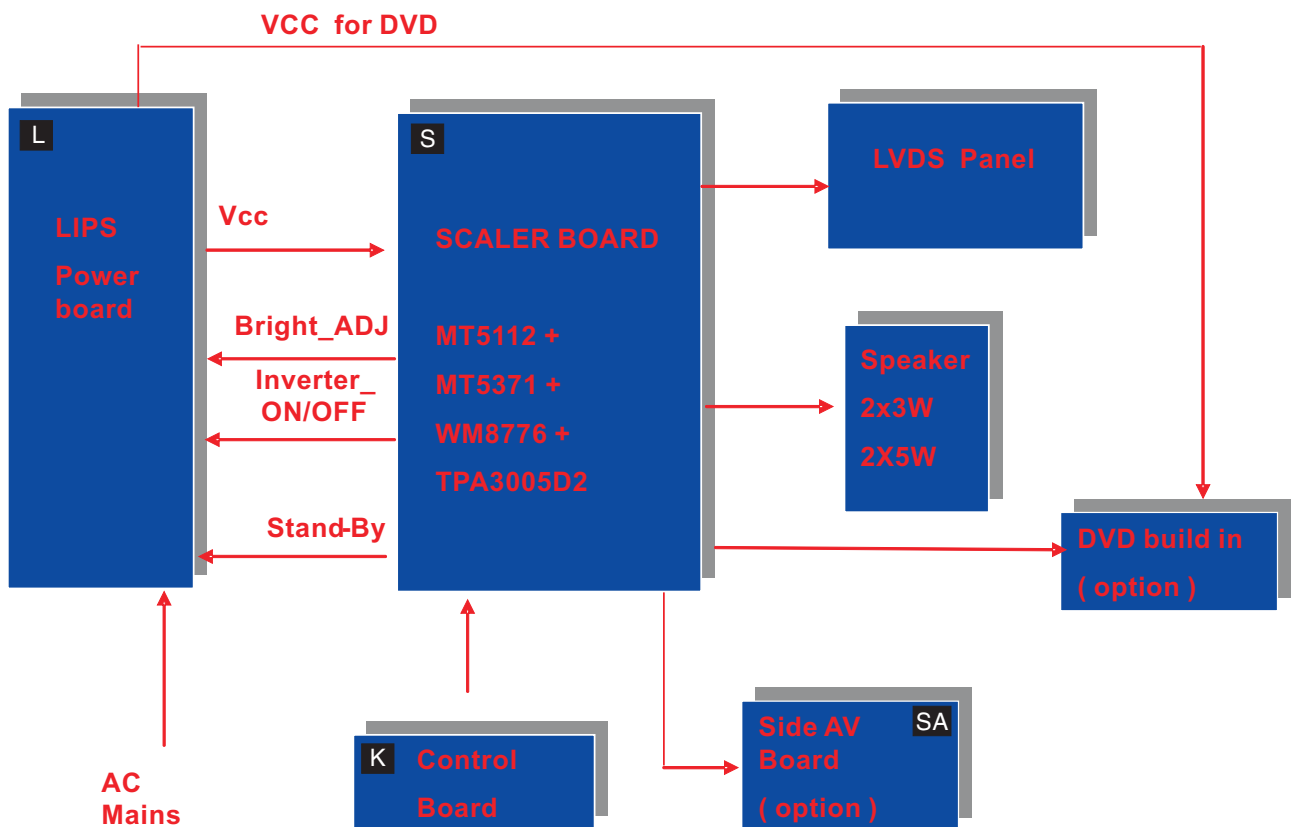


6.2 Block Diagram

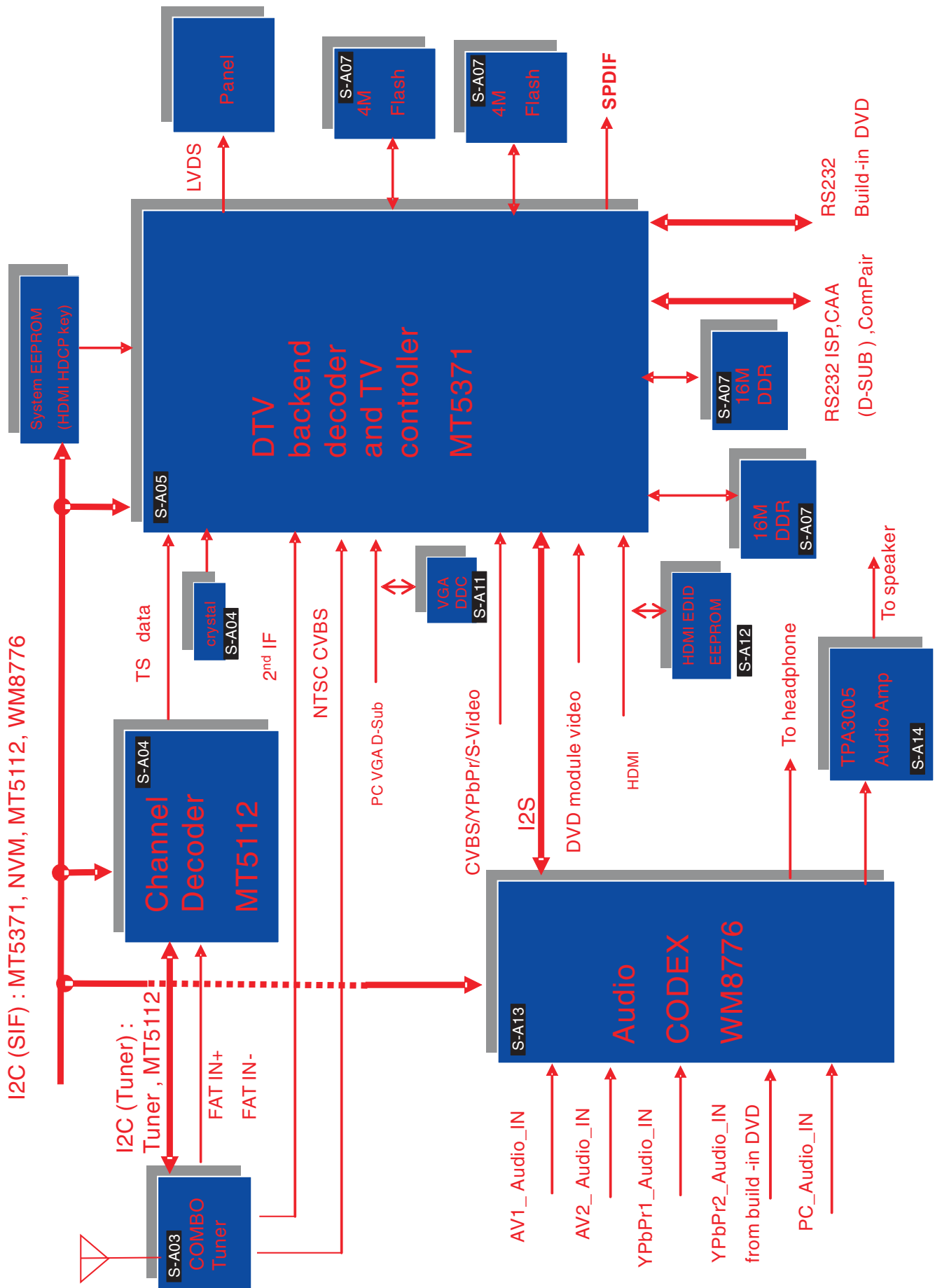
F3 15" architecture Block Diagram

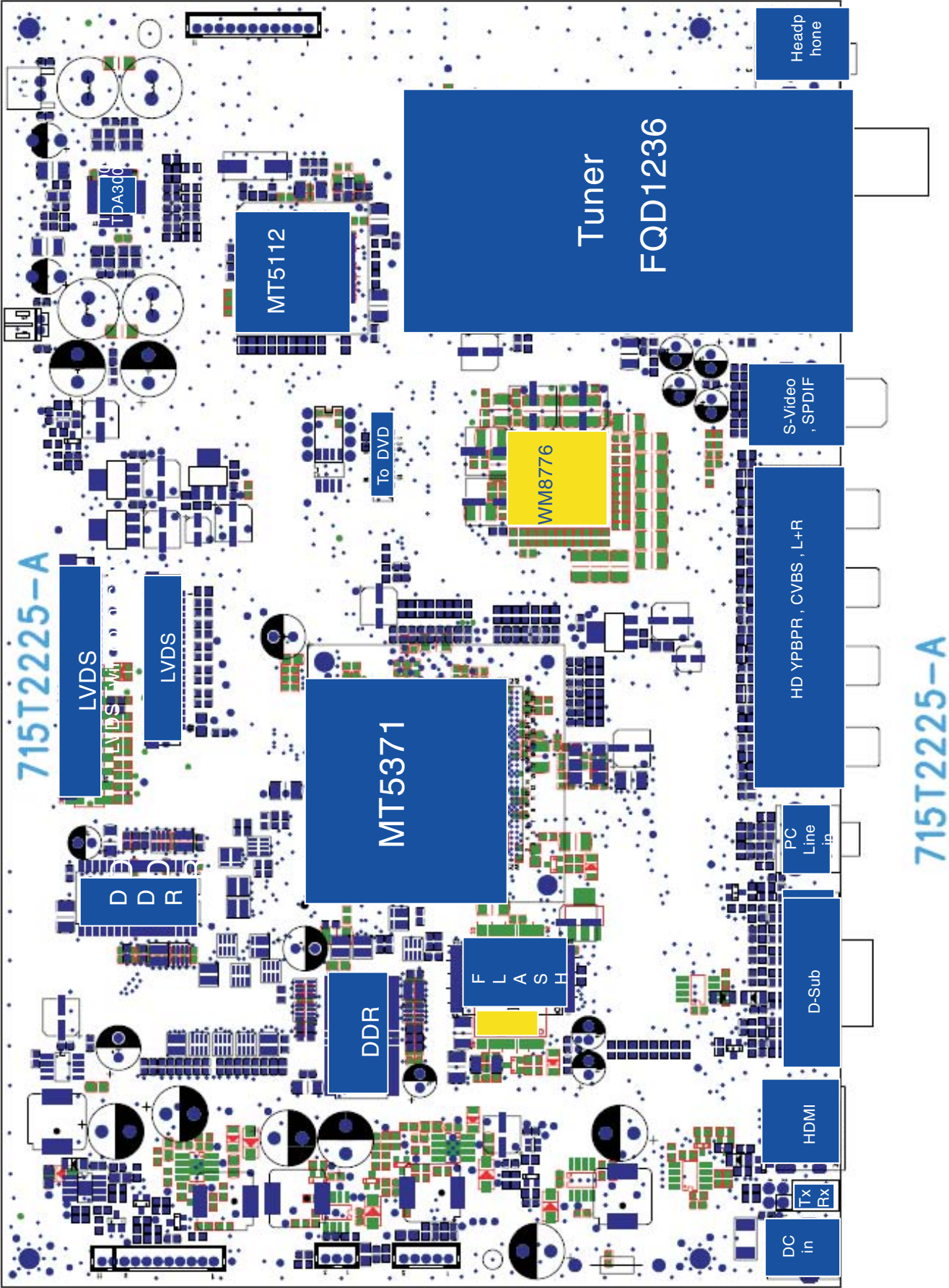


F3 19" Wide, 20" Wide architecture Block Diagram

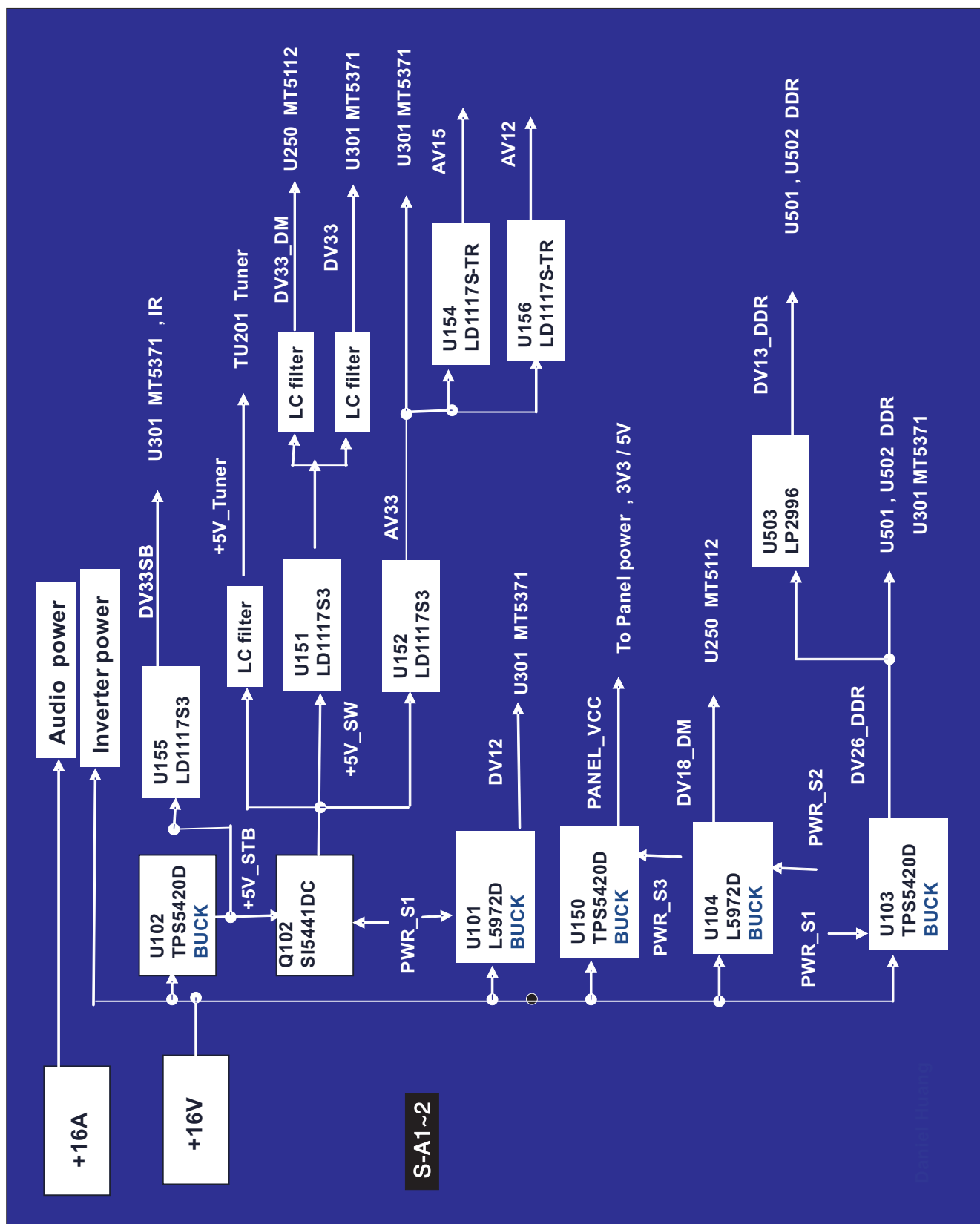


Function Block of main Board





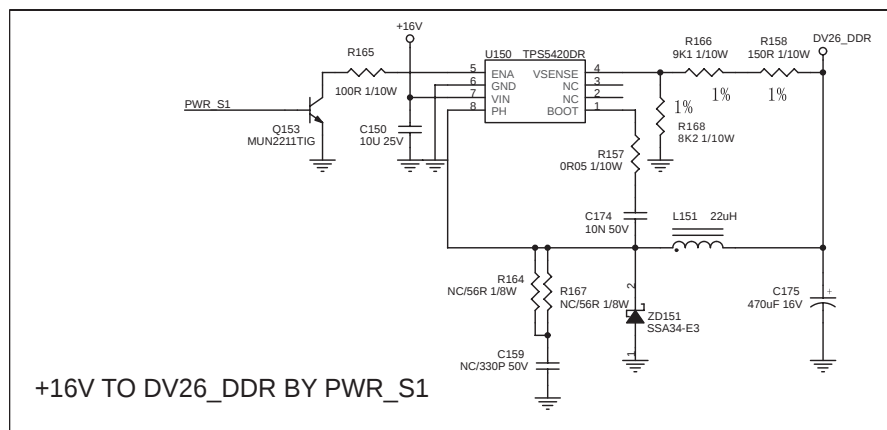
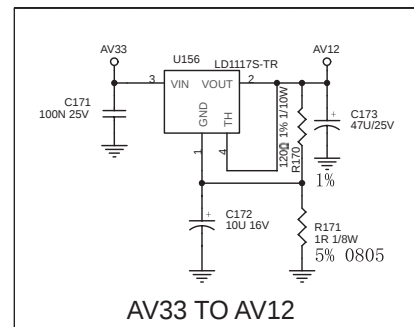
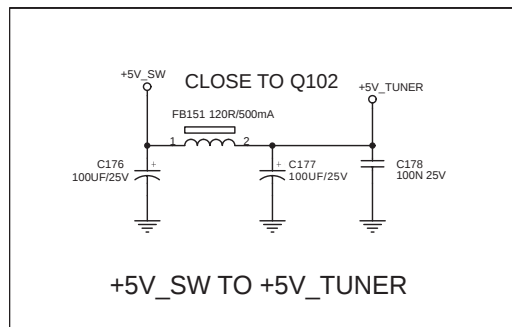
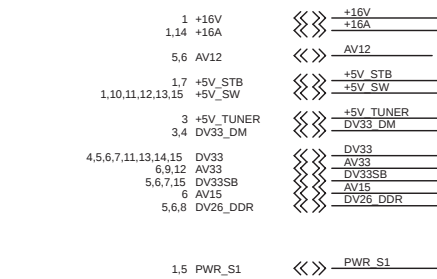
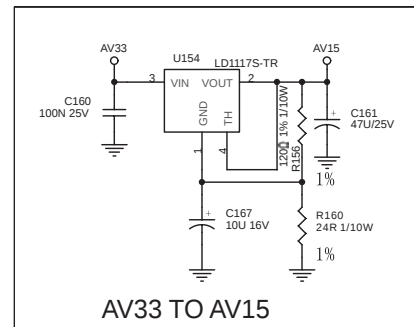
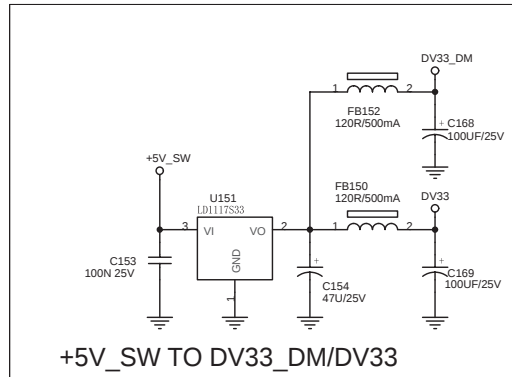
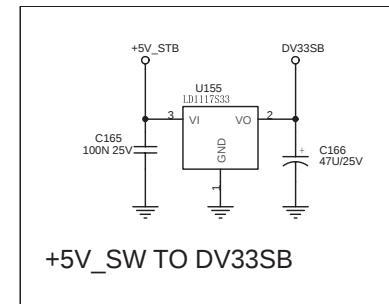
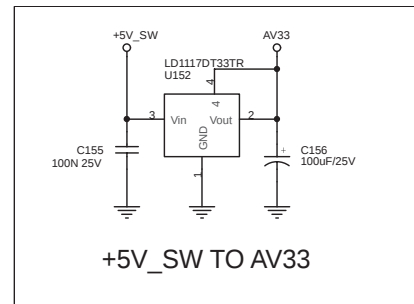
Power management



7. Circuit Diagrams and PWB Layouts

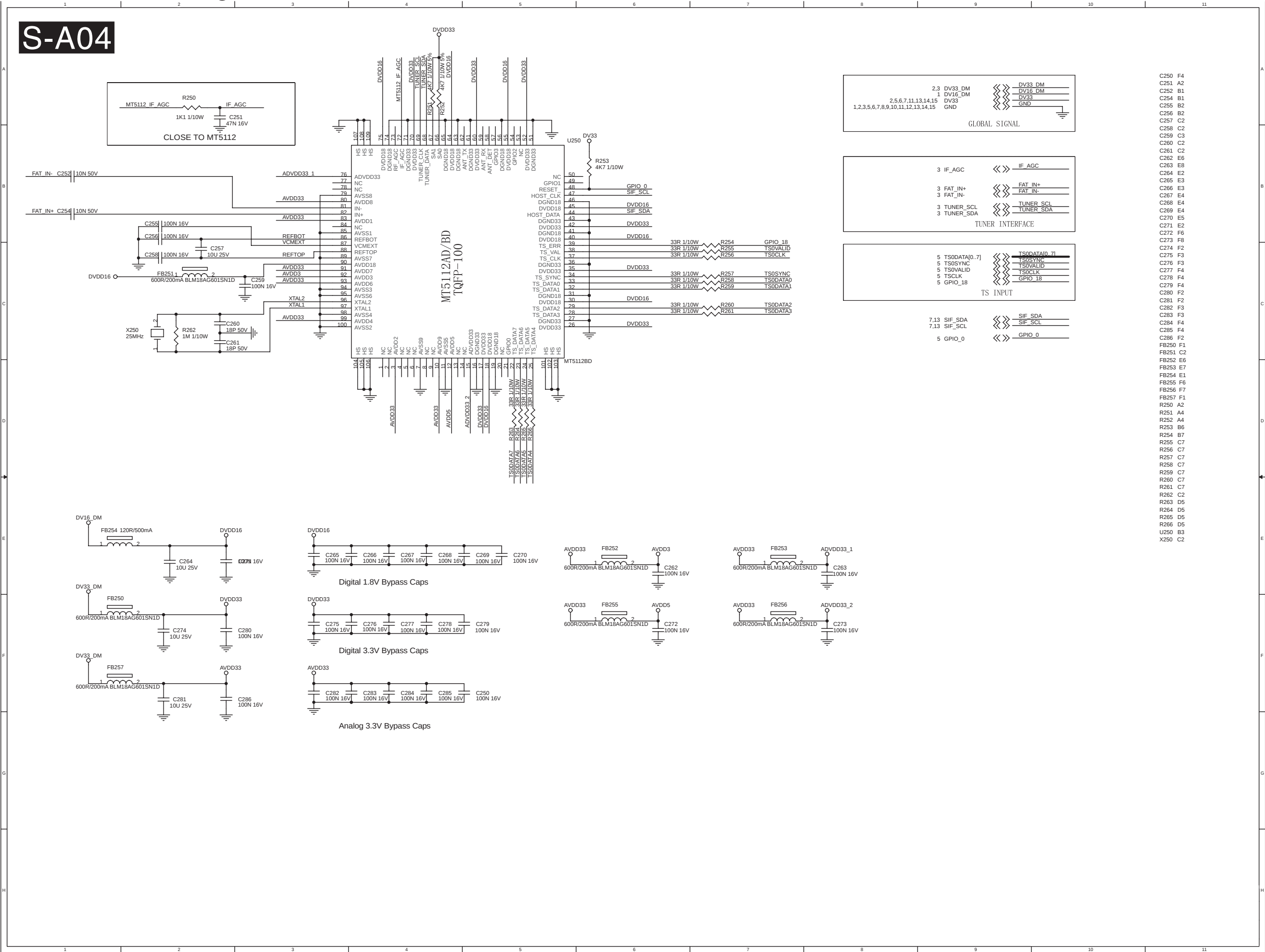
Scaler Board Schematic Diagram - Power

S-A02

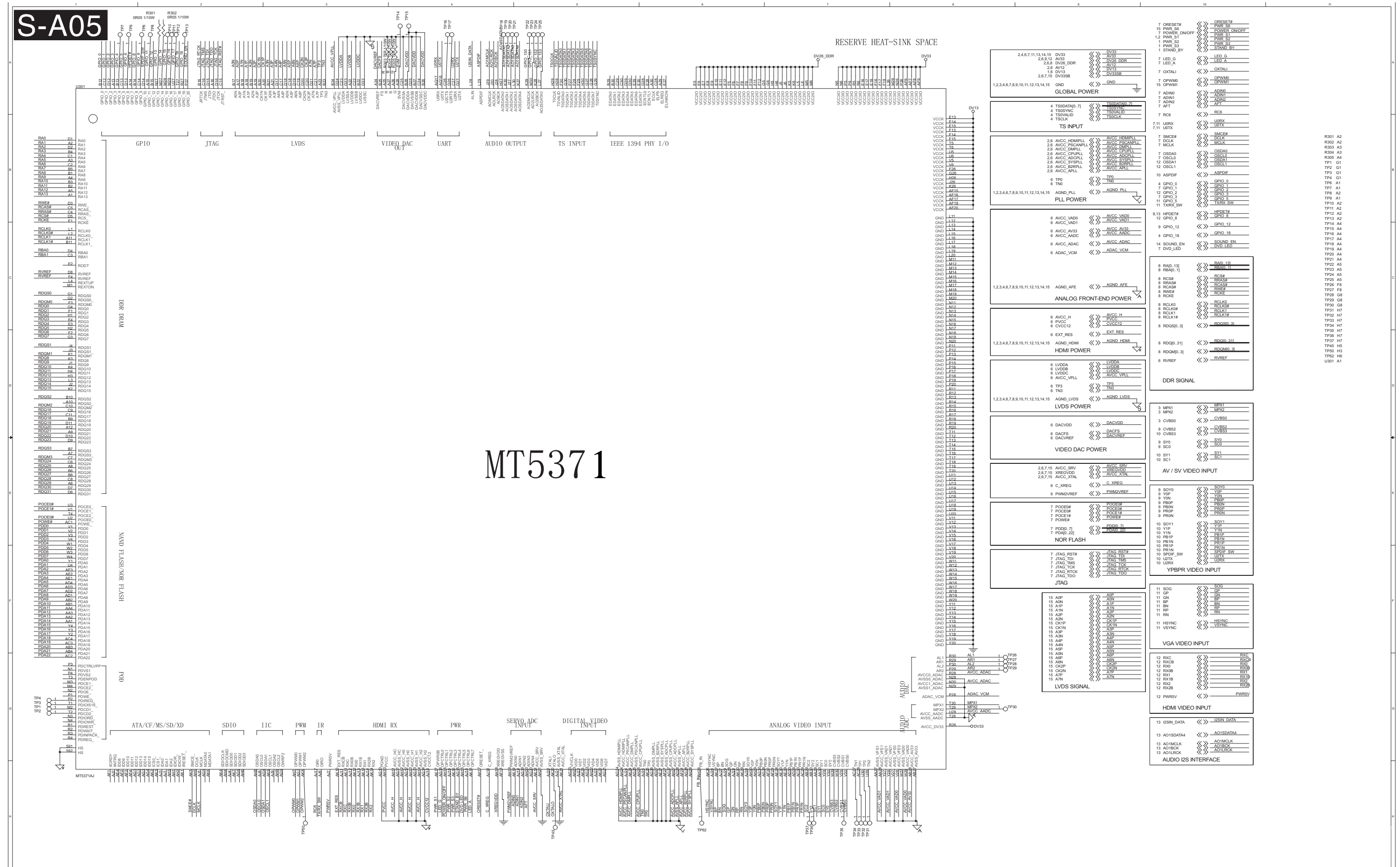


C150 F3
C153 C2
C154 C3
C155 B5
C156 B5
C159 G4
C160 C5
C161 C6
C165 B7
C166 B7
C167 C5
C168 C4
C169 C4
C171 D5
C172 E5
C173 D6
C174 F4
C175 G5
C176 E2
C177 E3
C178 E3
FB150 C3
FB151 D3
FB152 C3
L151 F5
Q153 F3
R156 C5
R157 F4
R158 F5
R160 C5
R164 G4
R165 F3
R166 F5
R167 G4
R168 F5
R170 D5
R171 E5
U150 F4
U151 C3
U152 A5
U154 C5
U155 A7
U156 D5
ZD151 G4

Scaler Board Schematic Diagram - MT5112 ATSC

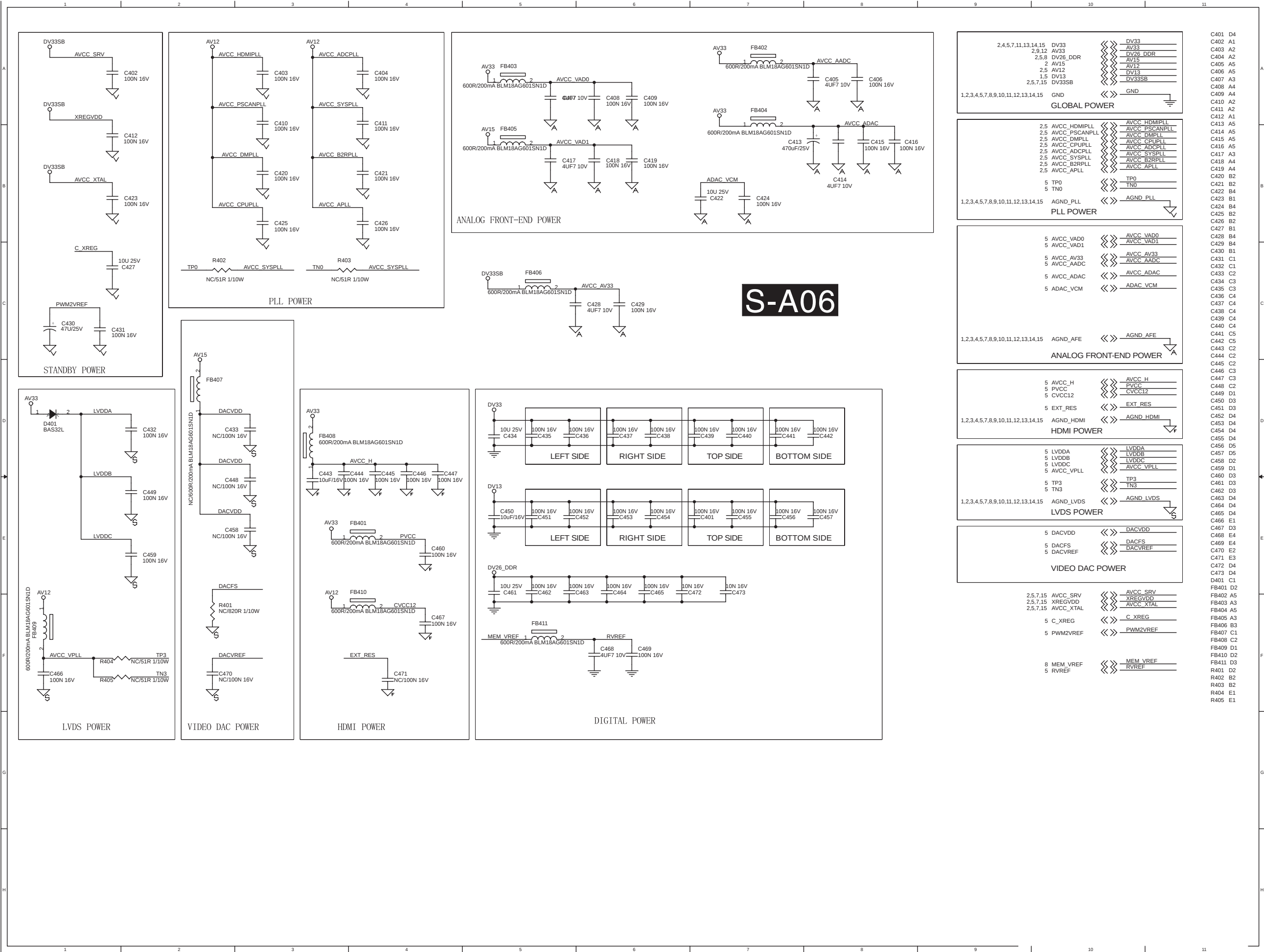


Scaler Board Schematic Diagram - MT5371 ATSC



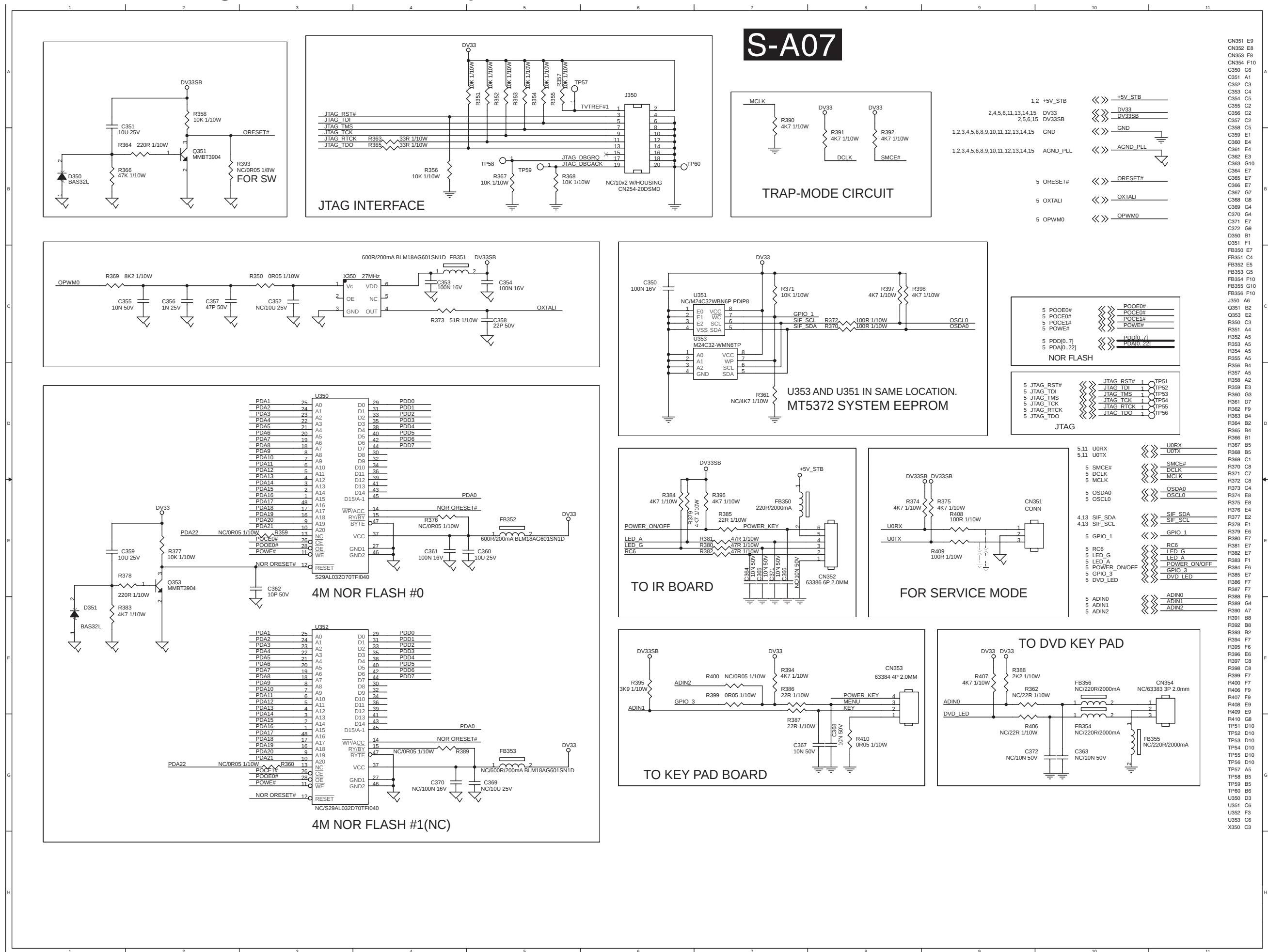
7. Circuit Diagrams and PWB Layouts

Scaler Board Schematic Diagram - MT5371 BYPASS CAP



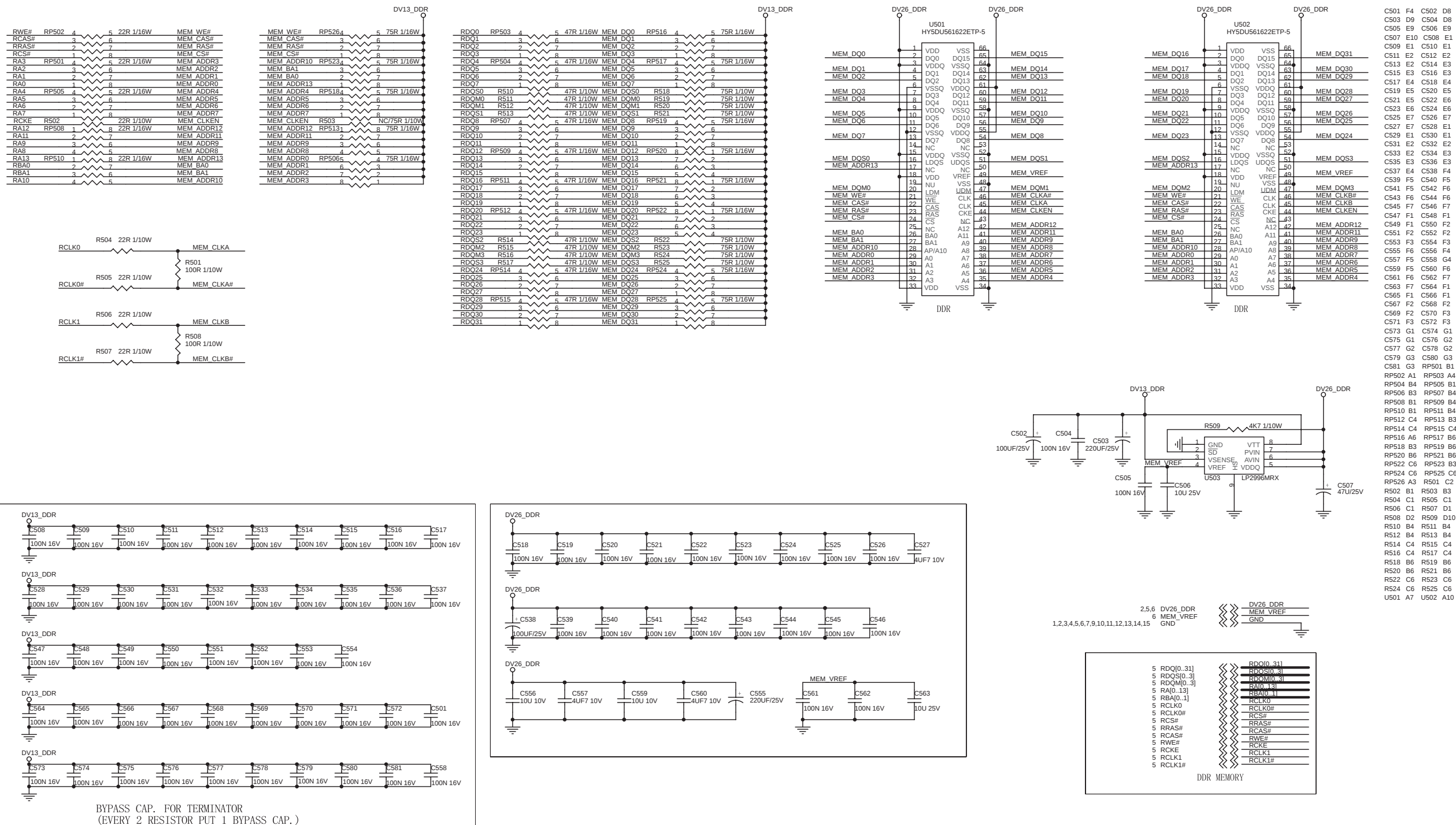
7.Circuit Diagrams and PWB Layouts

Scaler Board Schematic Diagram - Flash/MT5371 Peripheral

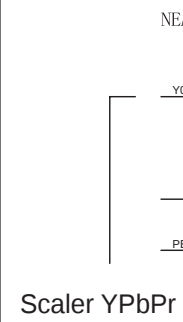


Scaler Board Schematic Diagram - DDR MEMORY

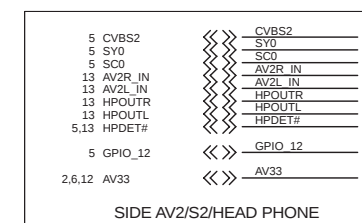
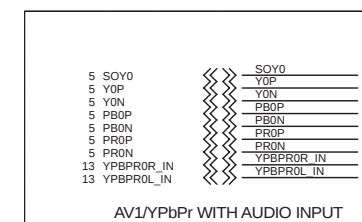
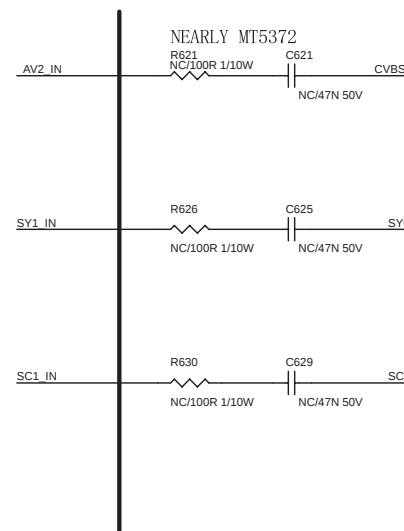
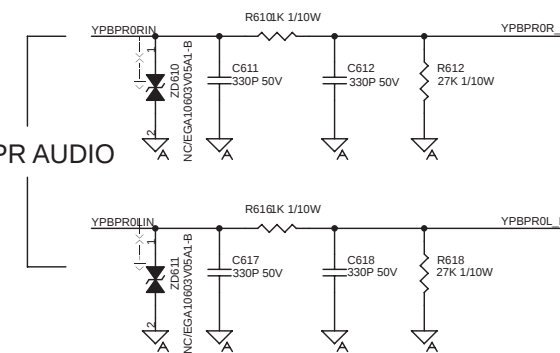
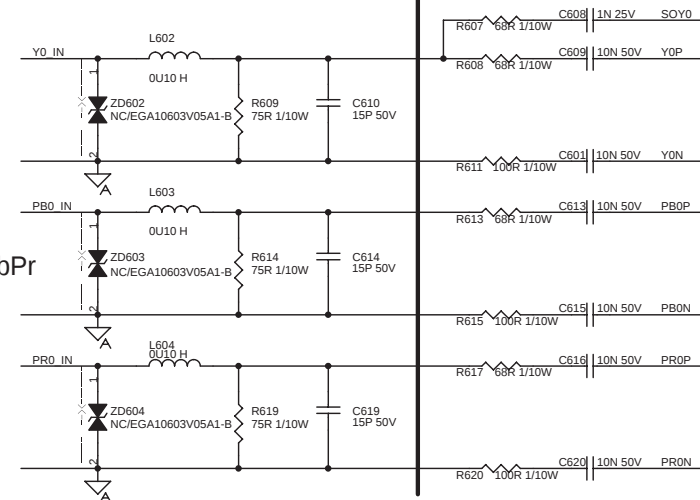
S-A08



S-A09

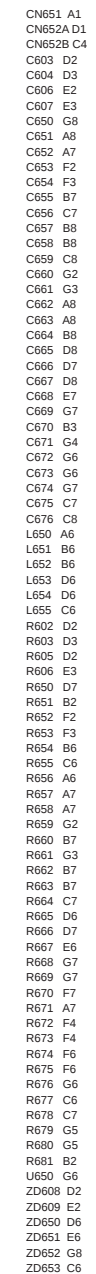
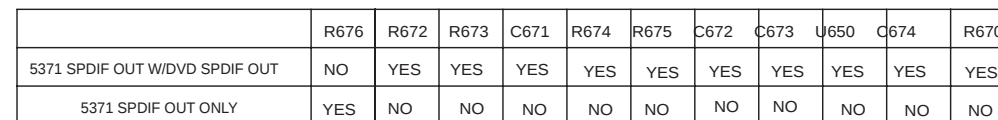
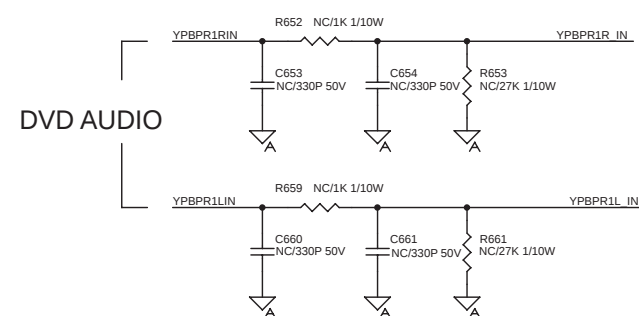


NEARLY MT5372



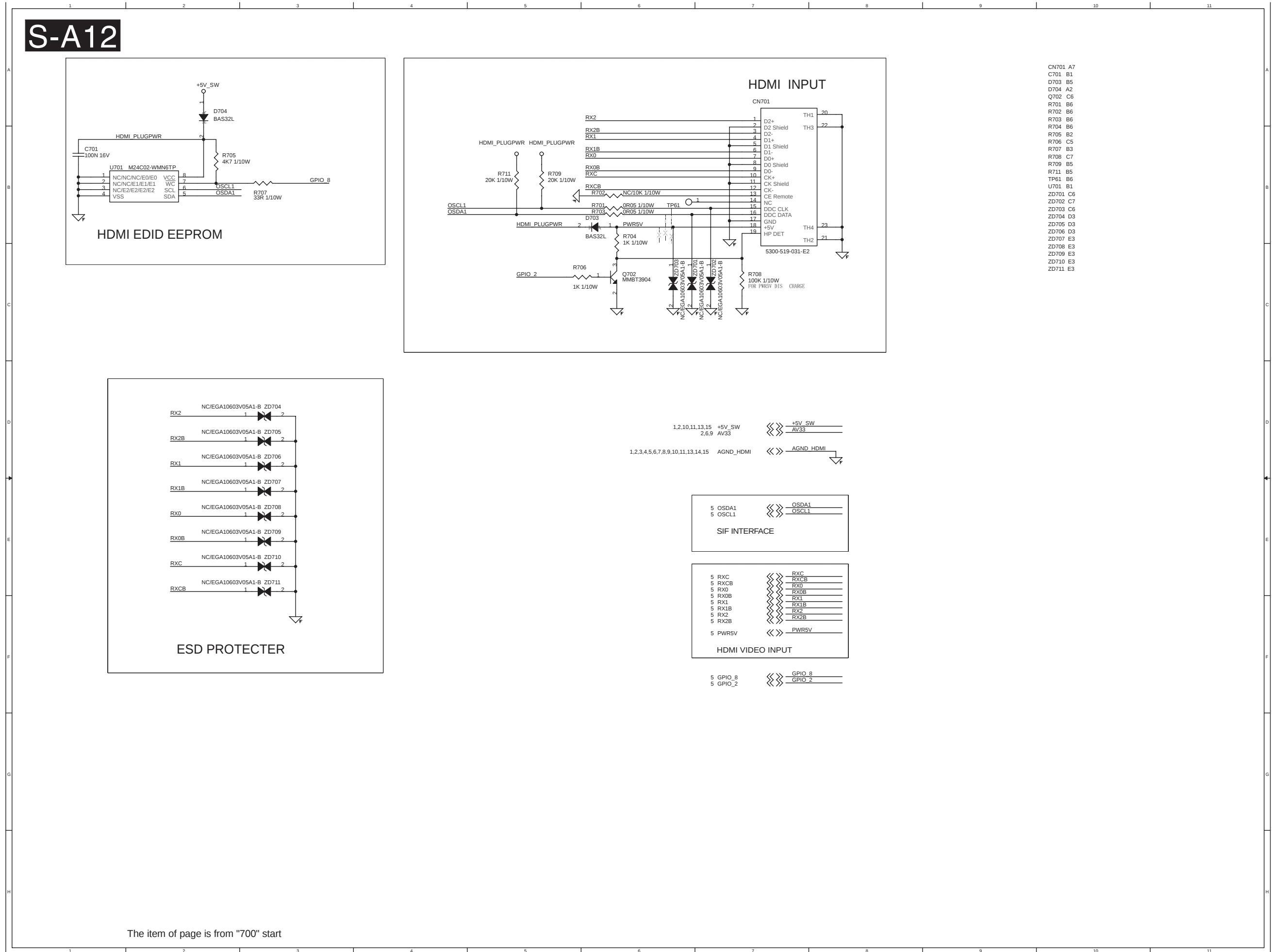
CN601	E1
CN602	B1
C601	B6
C608	B6
C609	B6
C610	B4
C611	B8
C612	B8
C613	B6
C614	C4
C615	C6
C616	C6
C617	C8
C618	C8
C619	C4
C620	C6
C621	D5
C622	E5
C629	F5
L602	B4
L603	B4
L604	C4
R607	B5
R608	B5
R609	B4
R610	B8
R611	B5
R612	B8
R613	B5
R614	C4
R615	C5
R616	C8
R617	C5
R618	C9
R619	C4
R620	C5
R621	D5
R625	E2
R626	E5
R630	F5
ZD602	B3
ZD603	B3
ZD604	C3
ZD610	B7
ZD611	C7

DVD YPbPr



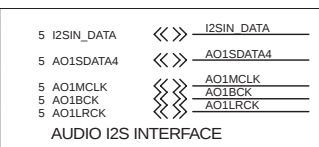
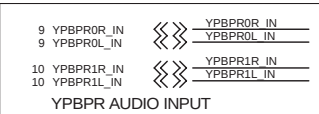
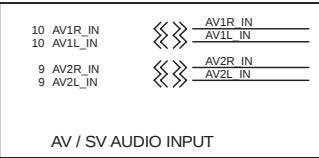
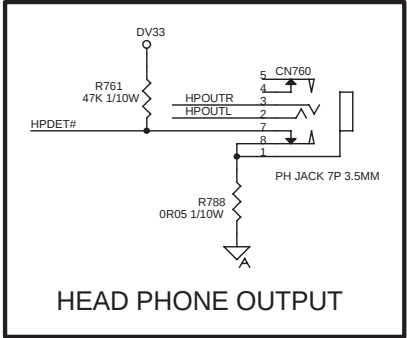
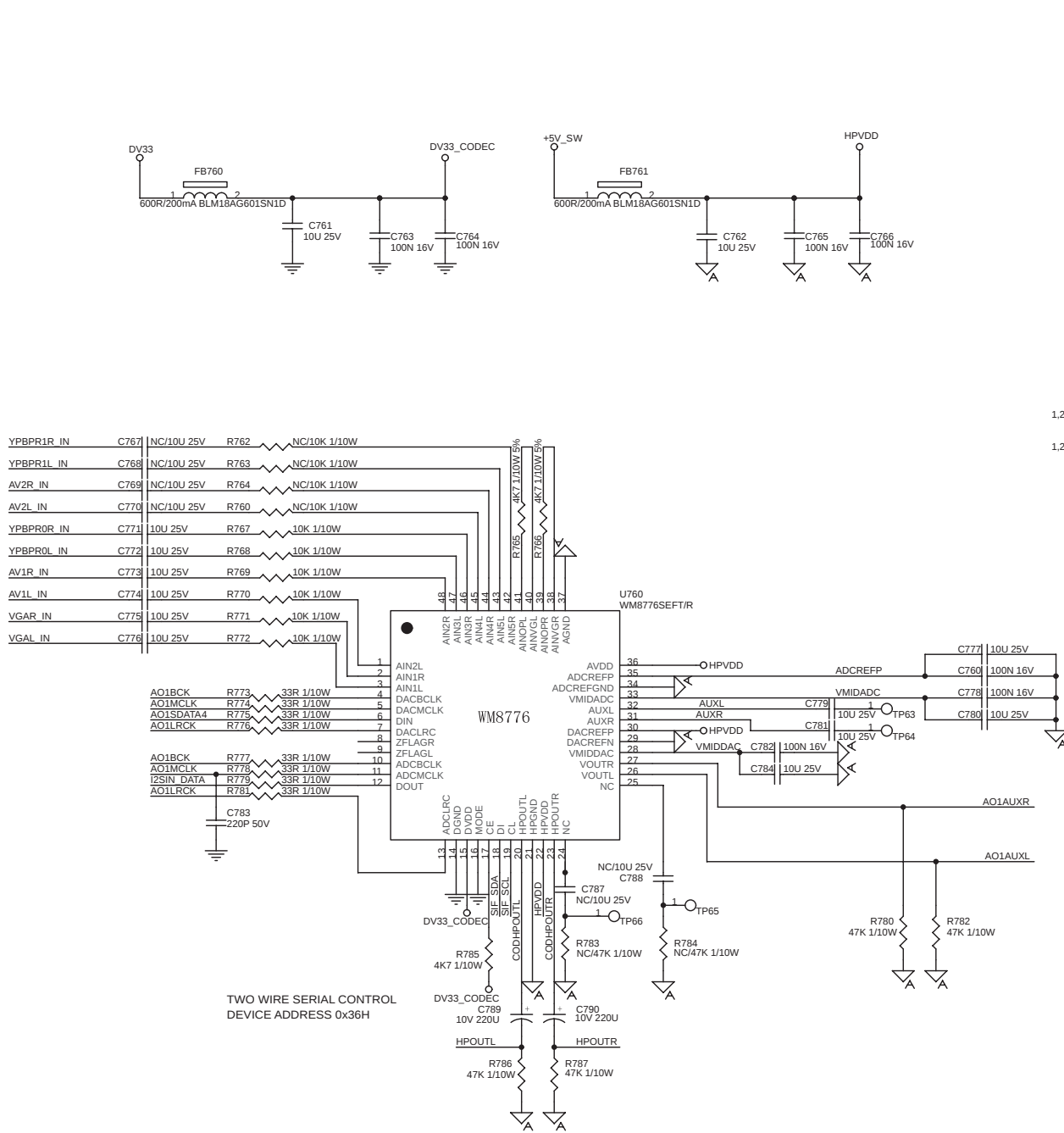
The item of page is from "650" start

Scaler Board Schematic Diagram - HDMI INPUT



Scaler Board Schematic Diagram - AUDIO CODER

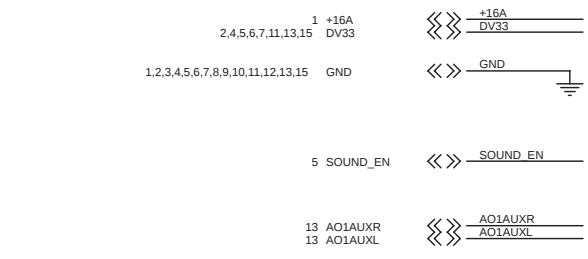
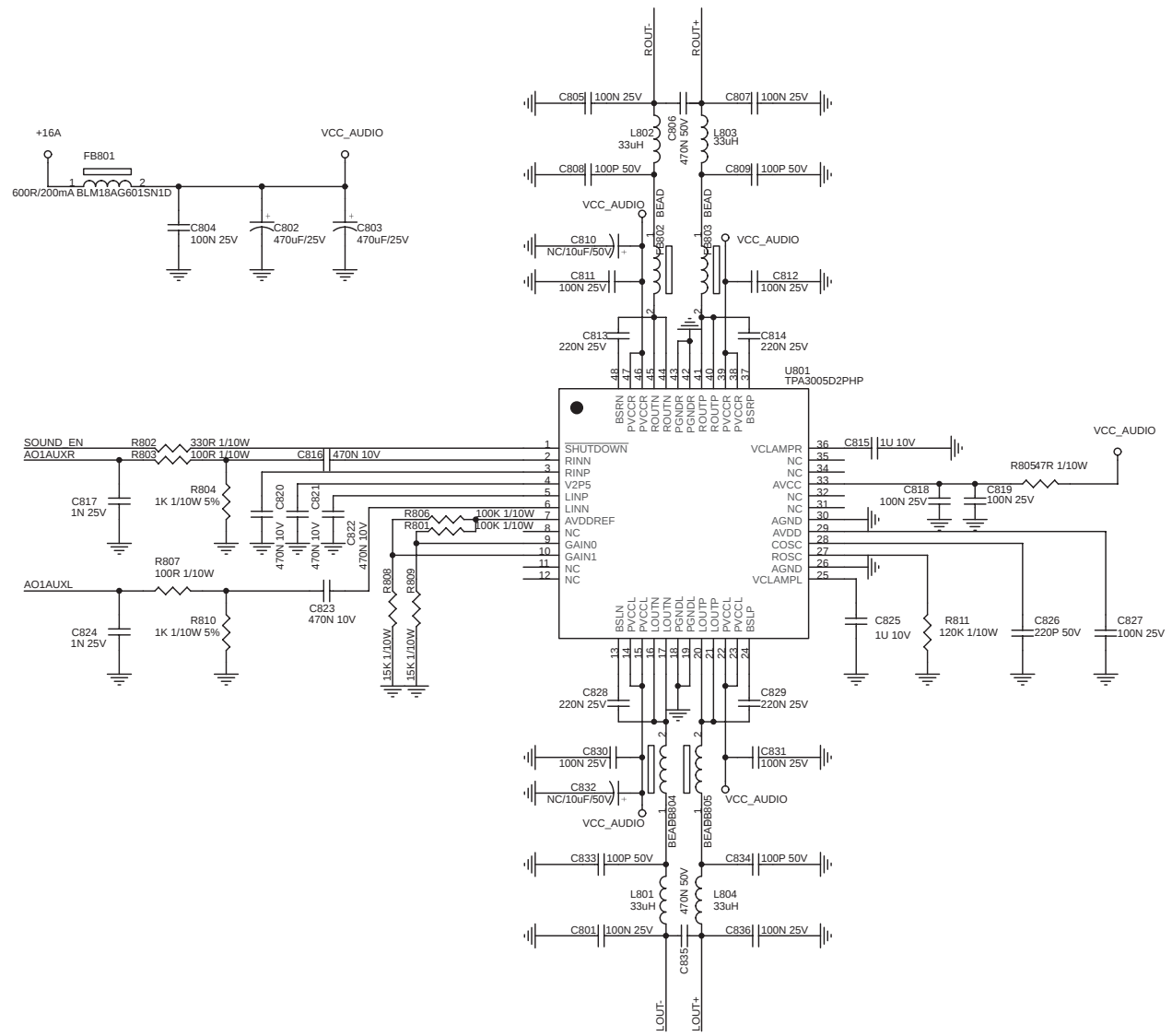
S-A13



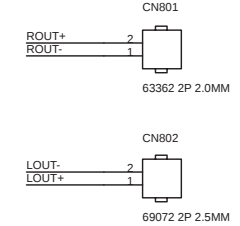
- CN760 A7
- C760 D6
- C761 B2
- C762 B4
- C763 B3
- C764 B3
- C765 B5
- C766 B5
- C767 C2
- C768 C2
- C769 C2
- C770 C2
- C771 C2
- C772 D2
- C773 D2
- C774 D2
- C775 D2
- C776 D2
- C777 D6
- C778 D6
- C779 D5
- C780 D6
- C781 D5
- C782 E5
- C783 E2
- C784 E5
- C787 E4
- C788 E4
- C789 F3
- C790 F4
- FB760 B2
- FB761 B4
- R760 C2
- R761 A7
- R762 C2
- R763 C2
- R764 C2
- R765 C3
- R766 C3
- R767 C2
- R768 D2
- R769 D2
- R770 D2
- R771 D2
- R772 D2
- R773 D2
- R774 D2
- R775 D2
- R776 D2
- R777 E2
- R778 E2
- R779 E2
- R780 E5
- R781 E2
- R782 E5
- R783 E4
- R784 E4
- R785 E3
- R786 F3
- R787 F4
- R788 B7
- TP63 D5
- TP64 D5
- TP65 E4
- TP66 E4
- U760 D3

Scaler Board Schematic Diagram - AUDIO AMP

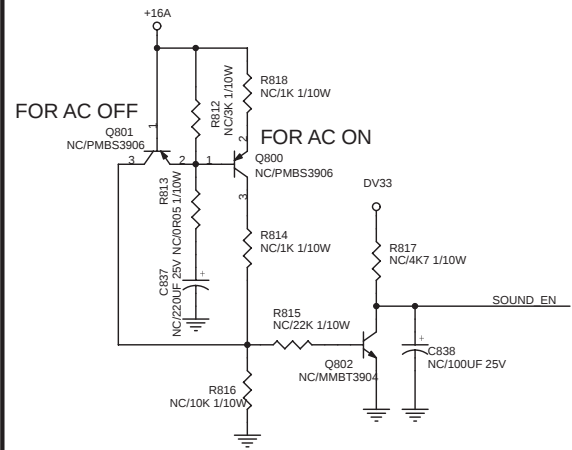
S-A14



REMARK +/- AND R/ L IN PCB



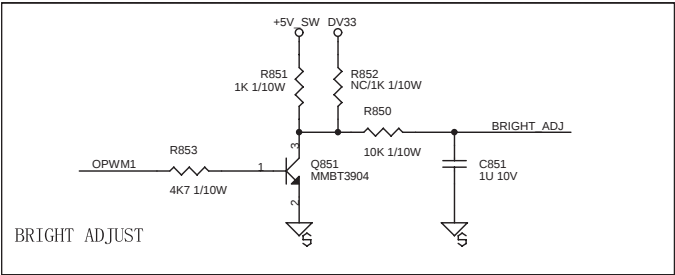
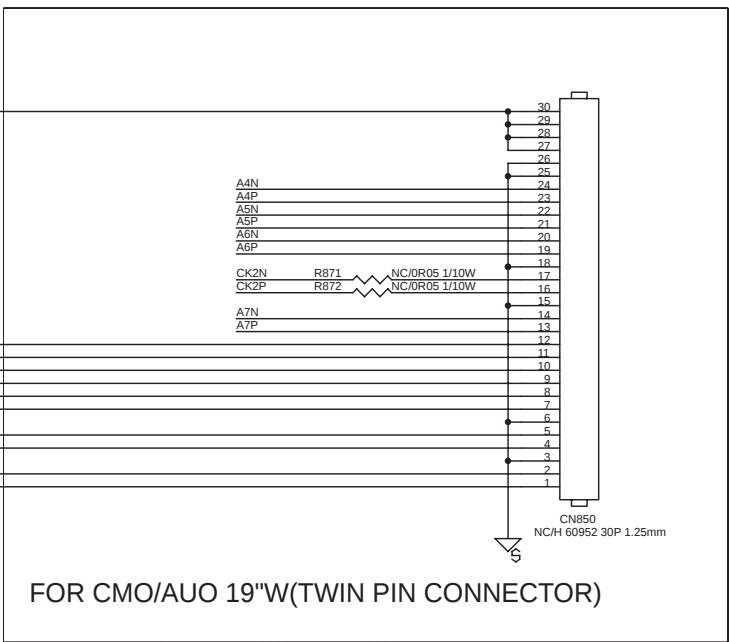
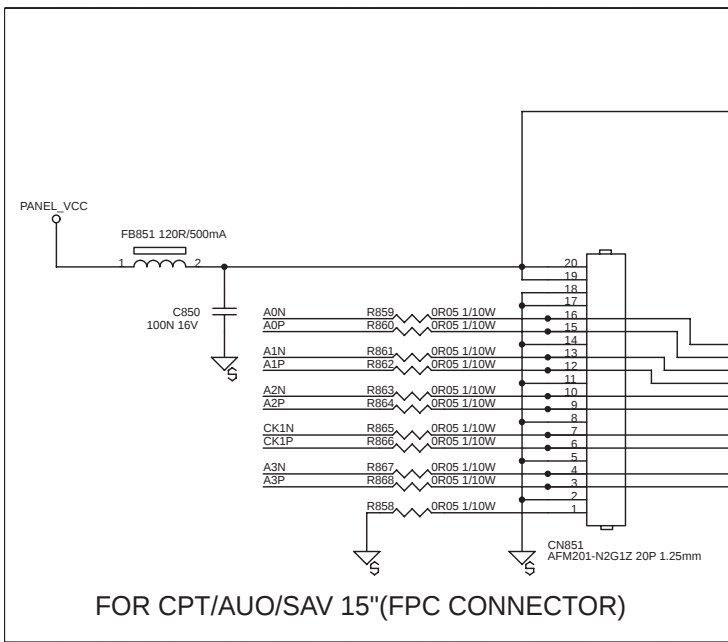
FOR SOLVE POP SOUND IN AC ON/OFF



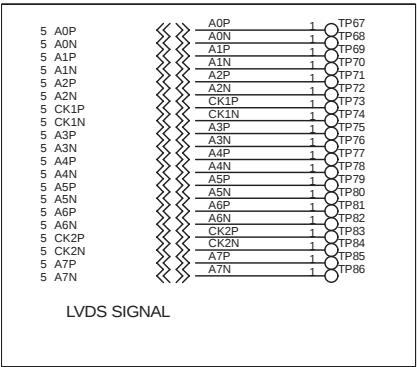
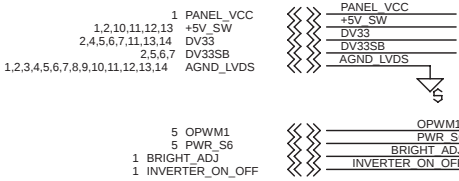
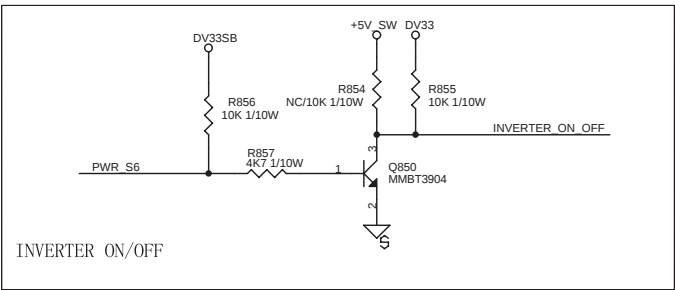
- CN801 C8
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- C804 B2
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- C808 B4
- C809 B4
- C810 B4
- C811 B4
- C812 B4
- C813 B4
- C814 B4
- C815 C5
- C816 C2
- C817 C1
- C818 C5
- C819 C5
- C820 C2
- C821 C2
- C822 C2
- C823 D2
- C824 D1
- C825 D5
- C826 D5
- C827 D6
- C828 D4
- C829 D4
- C830 D4
- C831 D4
- C832 D4
- C833 E4
- C834 E4
- C835 E4
- C836 E4
- C837 F8
- C838 F9
- FB801 B1
- FB802 B4
- FB803 B4
- FB804 D4
- FB805 D4
- L801 E4
- L802 B4
- L803 B4
- L804 E4
- Q800 E8
- Q801 E7
- Q802 F8
- R801 C3
- R802 C2
- R803 C2
- R804 C2
- R805 C6
- R806 C3
- R807 D2
- R808 D3
- R809 D3
- R810 D2
- R811 D5
- R812 E8
- R813 E8
- R814 E8
- R815 F8
- R816 F8
- R817 F8
- R818 E8
- U801 C3

Scaler Board Schematic Diagram - LVDS OUTPUT

S-A15



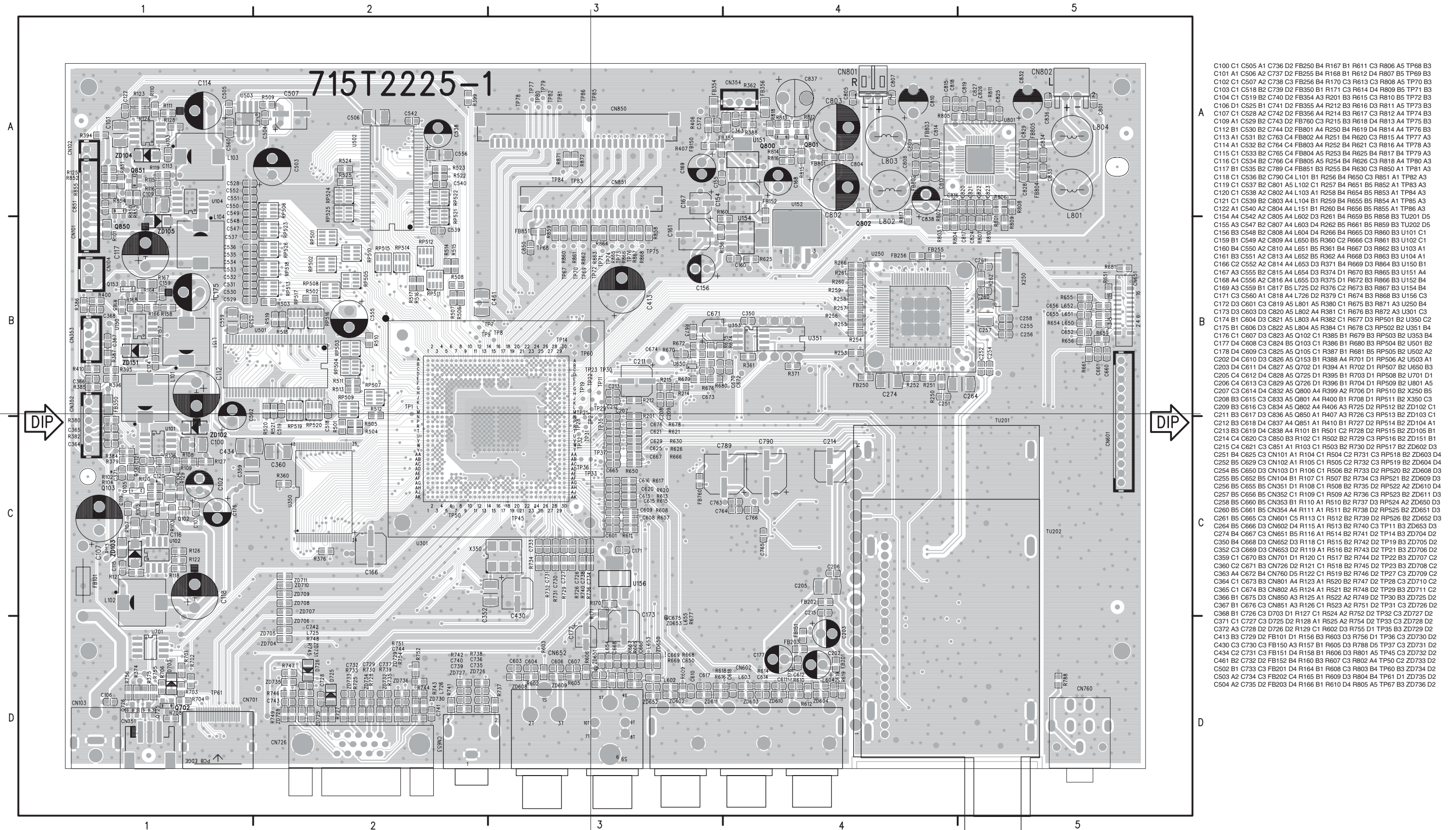
PANEL	CN851	CN850	R871	R872	R851	R852	R854	R855
CPT/AUO TV 15" 3V3	YES		NO		YES	NO	NO	YES
SVA/CPT M 15" 3V3	YES		NO		YES	NO	NO	YES
AUO/CMO 19"W 5V	NO		YES		YES	NO	NO	YES
AUO/CMO 20"W 5V	NO		YES		YES	NO	NO	YES
LPL 20"W 12V	NO		YES		NO	YES	NO	YES



CN850 A7
CN851 B4
C850 B2
C851 D3
FB851 B2
Q850 F3
Q851 D3
R850 D3
R851 D3
R852 D3
R853 D2
R854 E3
R855 E3
R856 F2
R857 F3
R858 C3
R859 B3
R860 B3
R861 B3
R862 B3
R863 C3
R864 C3
R865 C3
R866 C3
R867 C3
R868 C3
R871 B6
R872 B6
TP67 F8
TP68 F8
TP69 F8
TP70 F8
TP71 F8
TP72 F8
TP73 F8
TP74 F8
TP75 F8
TP76 F8
TP77 F8
TP78 F8
TP79 G8
TP80 G8
TP81 G8
TP82 G8
TP83 G8
TP84 G8
TP85 G8
TP86 G8

7. Circuit Diagrams and PWB Layouts

Scaler Board Layout(Top Side)

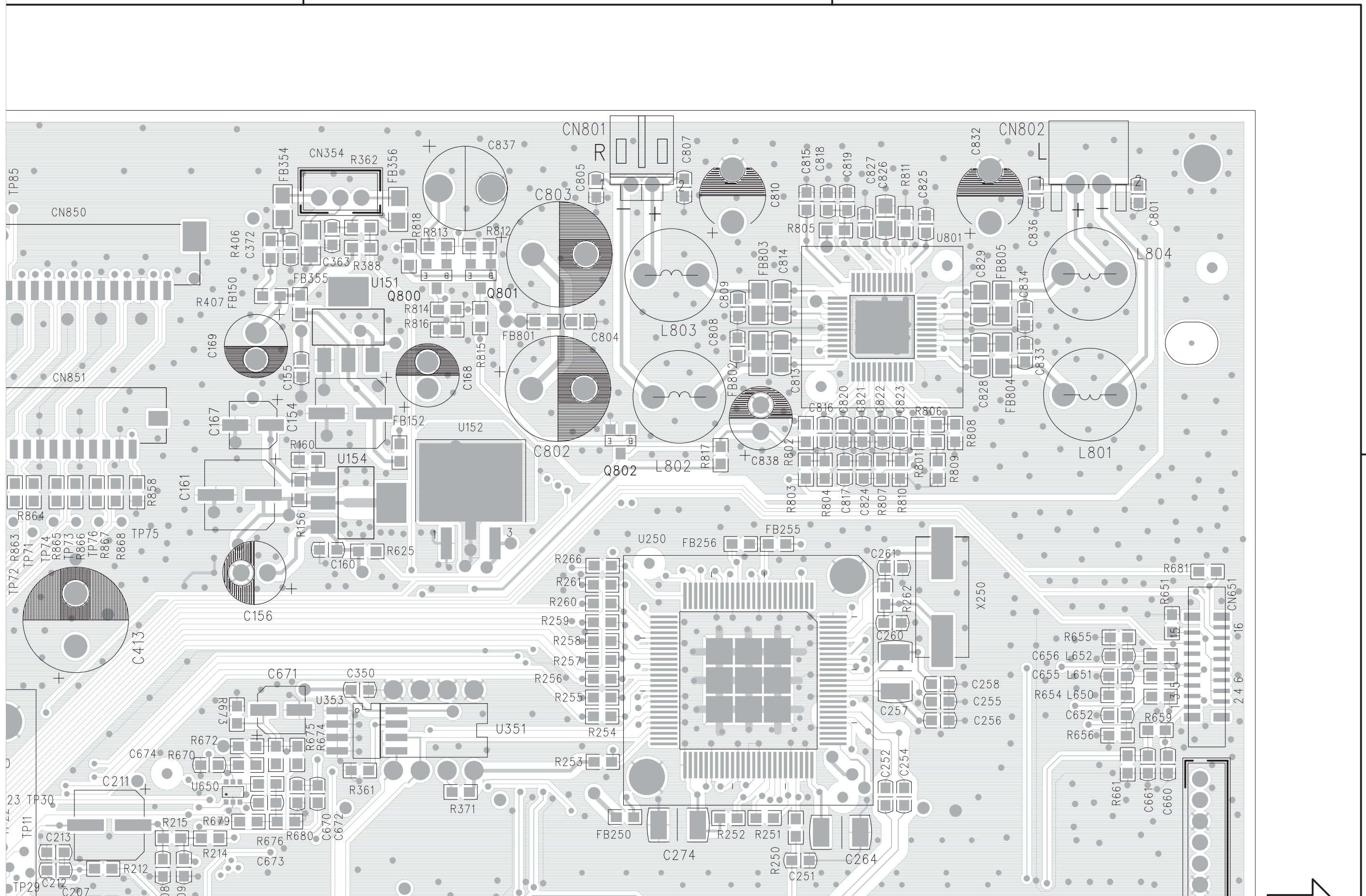


1

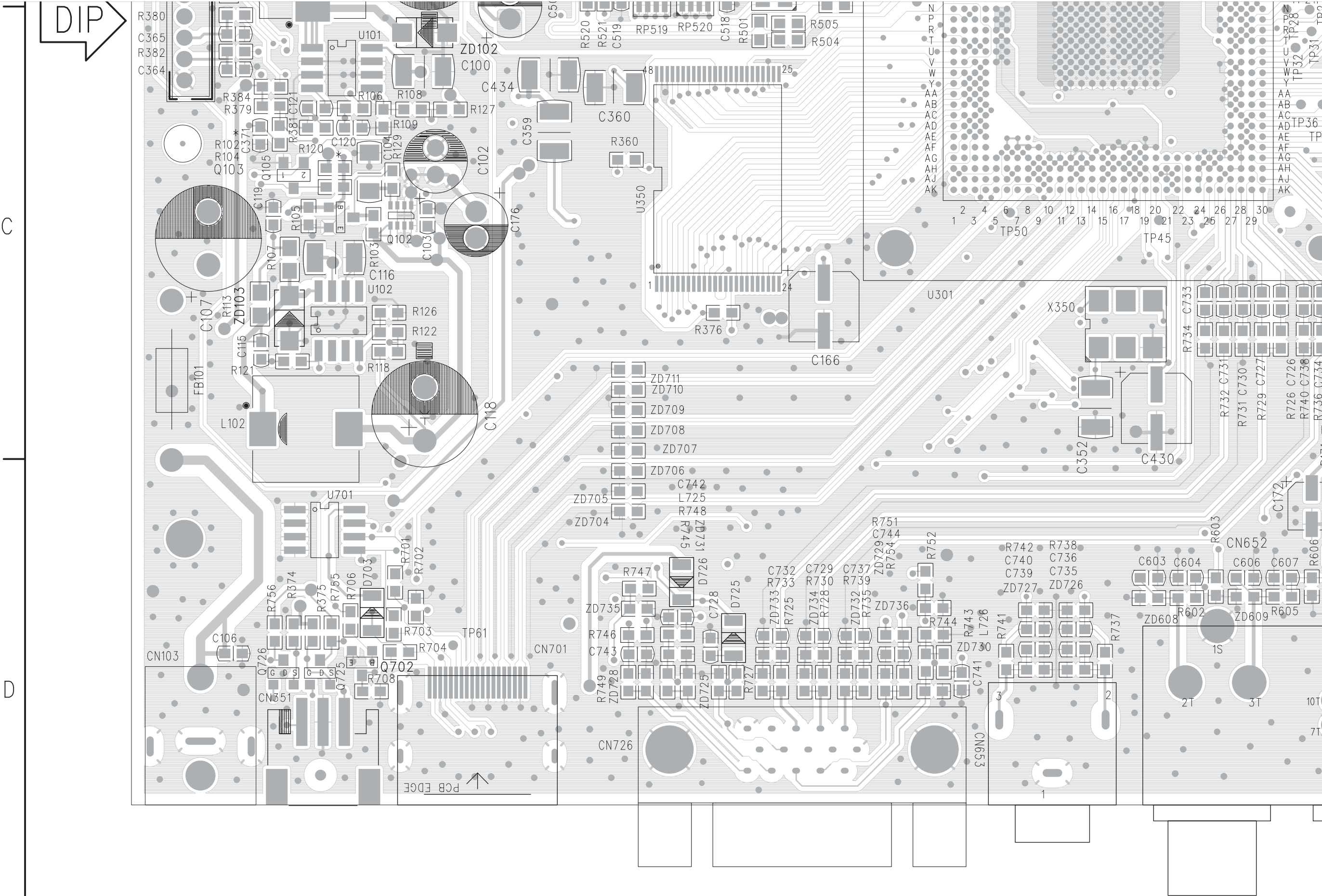


715T2225-1

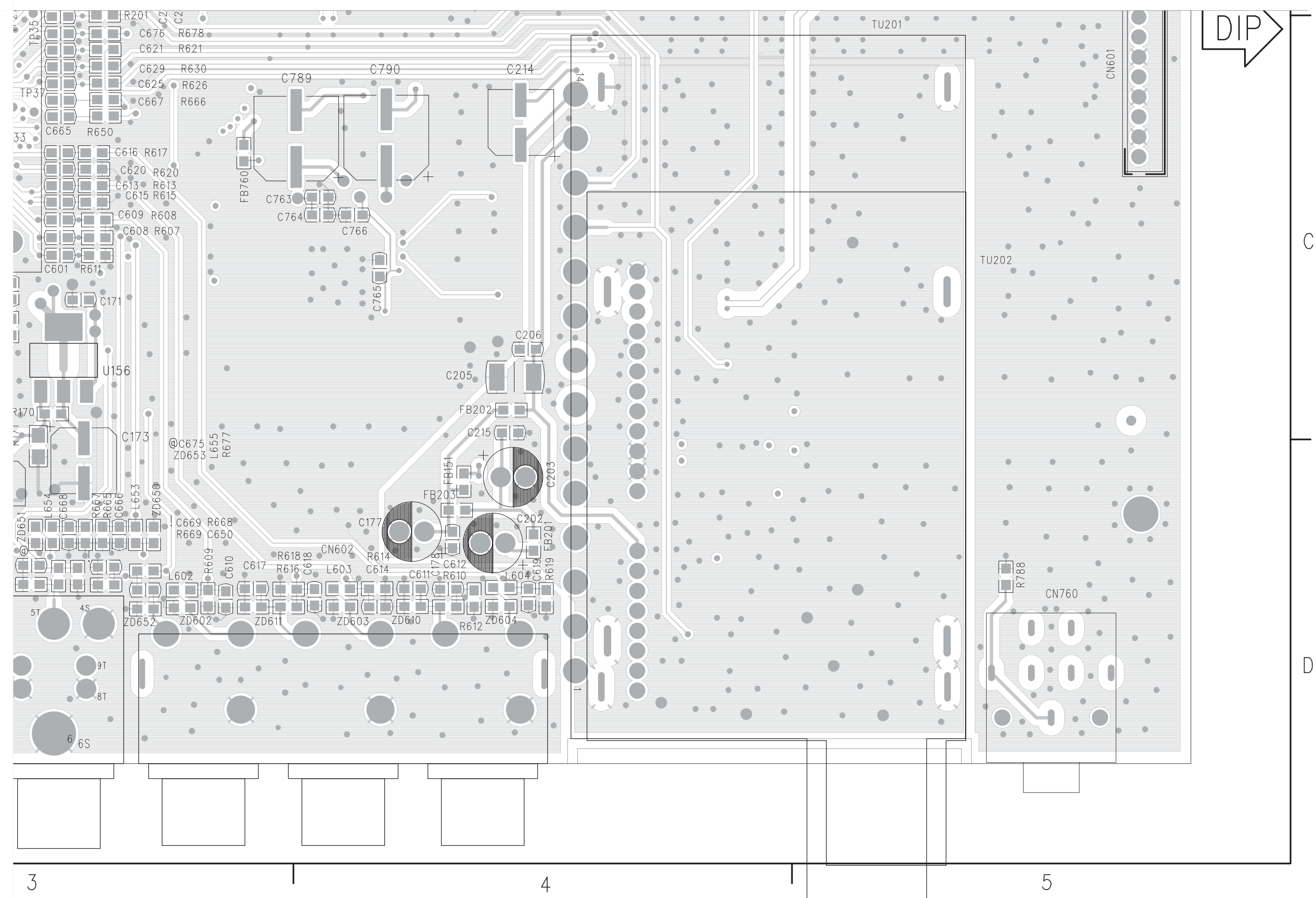
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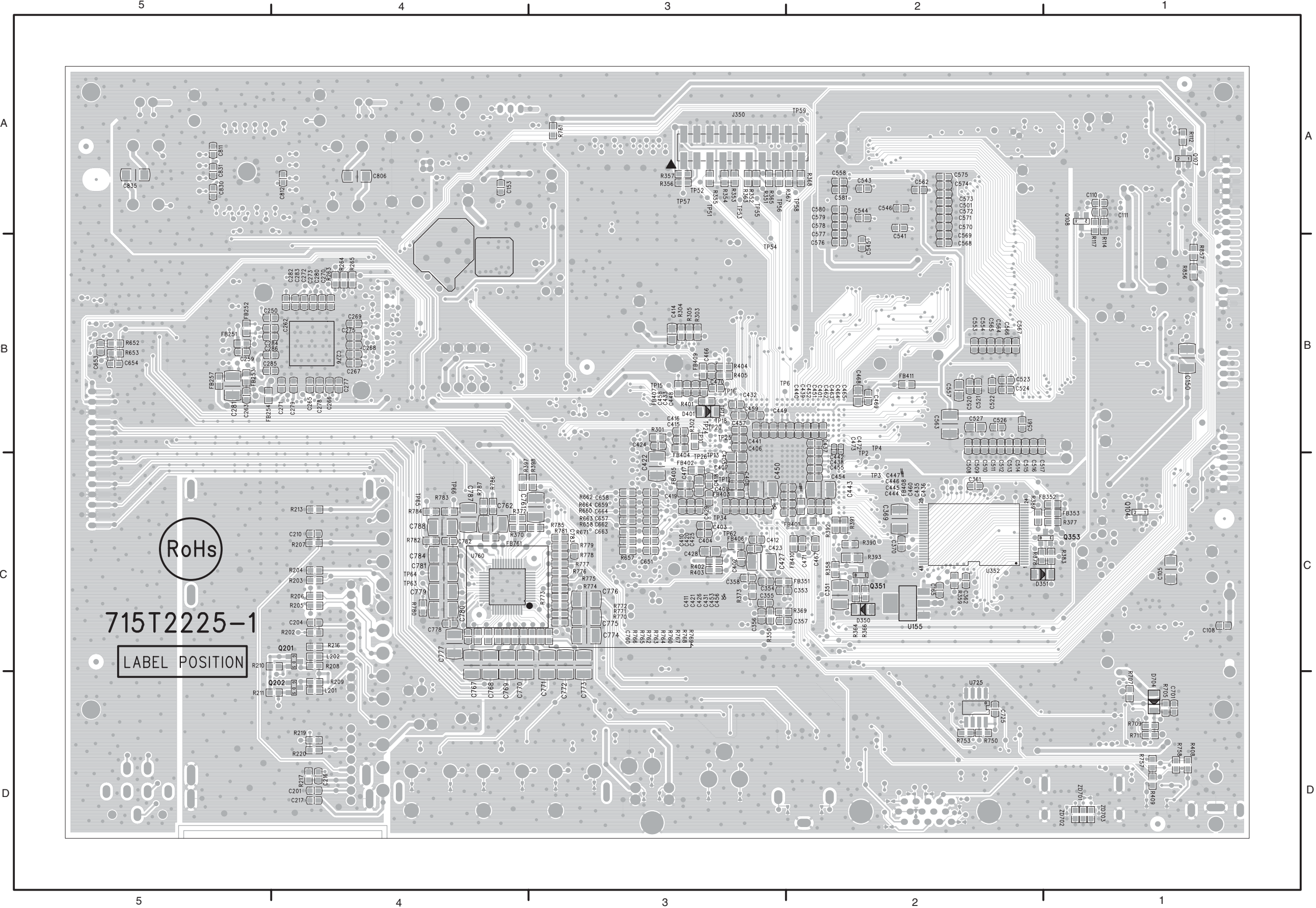
Scaler Board Layout(Top Side Part 3)



Scaler Board Layout(Top Side Part 4)



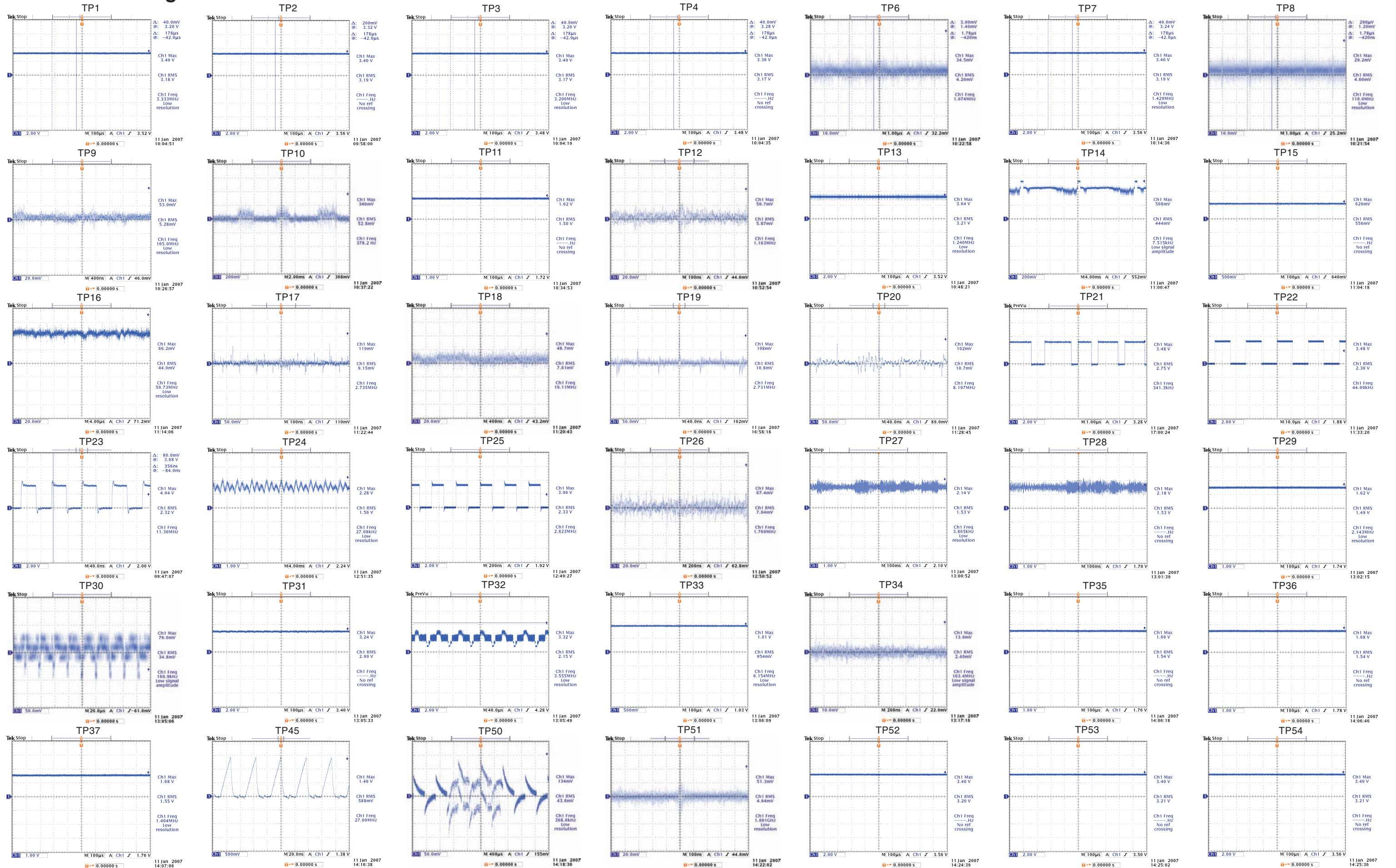
Scaler Board Layout(Bottom Side)



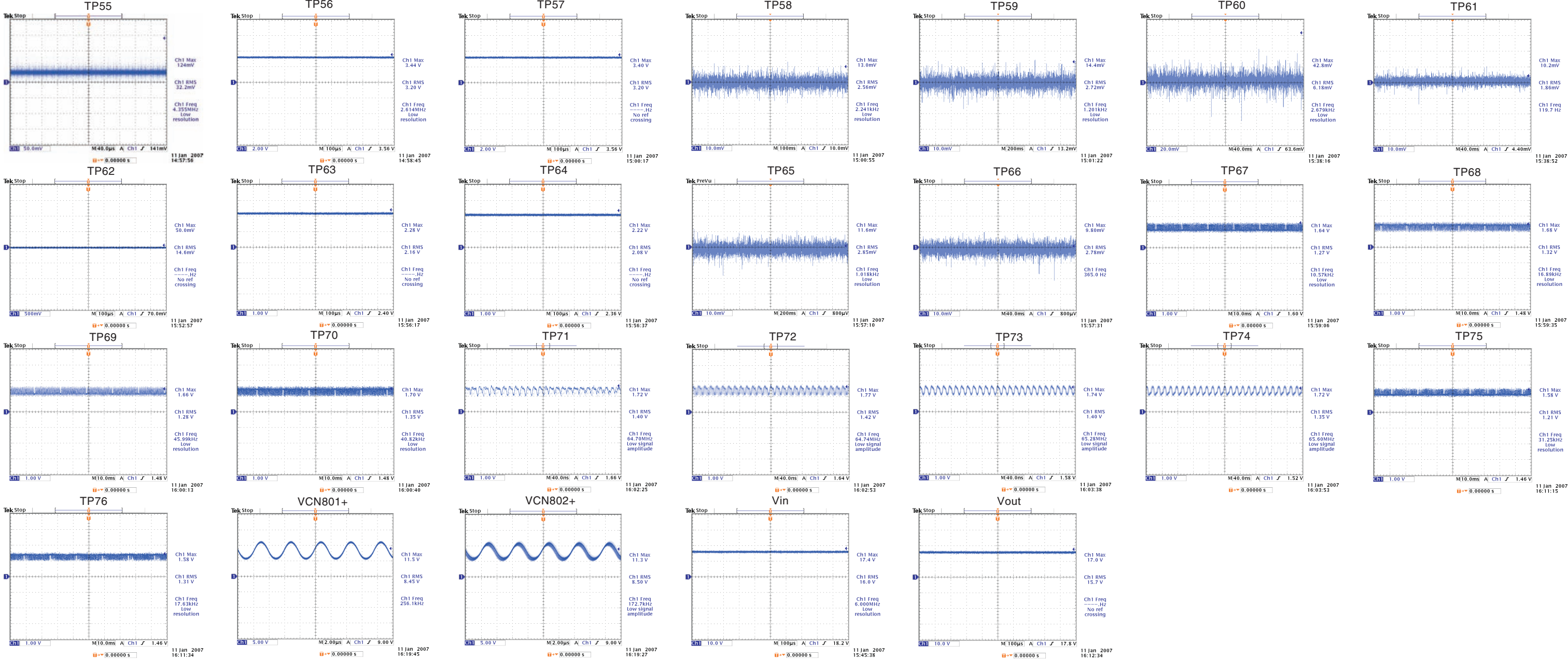
C105	C1	C420	C3	C524	B2	C788	C4	R305	B3	R771	C3	ZD702	D1
C108	C1	C421	C3	C526	B2	C806	A4	R350	C3	R772	C3	ZD703	D1
C110	A1	C422	C3	C527	B2	C811	A5	R351	A3	R773	C3		
C111	A1	C423	C3	C541	A2	C812	A4	R352	A3	R774	C3		
C150	B1	C424	B3	C543	A2	C830	A5	R353	A3	R775	C3		
C153	A4	C425	C3	C544	A2	C831	A5	R354	A3	R776	C3		
C165	C2	C426	C3	C545	B2	C835	A5	R355	A3	R777	C3		
C201	D4	C427	C3	C546	A2	D350	C2	R356	A3	R778	C3		
C204	C4	C428	C3	C553	B2	D351	C2	R357	A3	R779	C3		
C210	C4	C429	C3	C554	B2	D401	B3	R358	C2	R780	C4		
C216	D4	C431	B3	C557	B2	D704	D1	R359	C2	R781	C3		
C217	D4	C432	B3	C558	A2	FB251	B5	R363	A3	R782	C4		
C250	B5	C433	B3	C561	B2	FB252	B5	R364	C2	R783	C4		
C259	B5	C435	C2	C562	A2	FB253	B5	R365	A3	R784	C4		
C262	B5	C436	C2	C563	B2	FB254	B5	R366	C2	R785	C3		
C263	B5	C437	B2	C564	B2	FB257	B5	R367	A2	R786	C4		
C265	B4	C438	C2	C565	B2	FB351	C2	R368	A2	R787	C4		
C266	B4	C439	B3	C566	B2	FB352	C1	R369	C2	R856	B1		
C267	B4	C440	B3	C567	B2	FB353	C1	R370	C4	R857	B1		
C268	B4	C441	B3	C568	B2	FB401	C2	R372	C4	TP10	B3		
C269	B4	C442	B2	C569	B2	FB402	C3	R373	C3	TP12	C3		
C270	B4	C443	C2	C570	A2	FB403	C3	R377	C1	TP13	C3		
C271	B4	C444	C3	C571	A2	FB404	B3	R378	C2	TP15	B3		
C272	B4	C445	C3	C572	A2	FB405	C3	R383	C1	TP16	B3		
C273	B4	C446	C3	C573	A2	FB406	C3	R389	C2	TP17	B3		
C275	B4	C447	C3	C574	A2	FB407	B3	R390	C2	TP18	B3		
C276	B4	C448	B3	C575	A2	FB408	C2	R391	C2	TP20	B3		
C277	B4	C449	B3	C576	B2	FB409	B3	R392	C2	TP24	B3		
C278	B4	C450	C3	C577	B2	FB410	C2	R393	C2	TP25	B3		
C279	B4	C451	B3	C578	A2	FB411	B2	R397	C4	TP26	C3		
C280	B4	C452	B3	C579	A2	FB761	C4	R398	C3	TP34	C3		
C281	B5	C453	C3	C580	A2	J350	A3	R401	B3	TP38	D3		
C282	B4	C454	C2	C581	A2	L201	D4	R402	C3	TP51	A3		
C283	B4	C455	C2	C581	C3	L202	C4	R403	C3	TP52	A3		
C284	B5	C456	C3	C583	B5	Q104	C1	R404	B3	TP53	A3		
C285	B5	C457	B3	C584	B5	Q107	A1	R405	B3	TP54	B3		
C286	B5	C458	B3	C587	C3	Q108	A1	R408	D1	TP55	A3		
C351	C2	C459	B3	C588	C3	Q201	C4	R409	D1	TP56	A3		
C353	C2	C460	C2	C589	C3	Q202	D4	R652	B5	TP57	A3		
C354	C3	C462	B2	C592	C3	Q351	C2	R653	B5	TP58	A2		
C355	C3	C463	B2	C593	C3	Q352	C2	R657	C3	TP59	A2		
C356	C3	C464	B2	C594	C3	R112	A1	R658	C3	TP62	C3		
C357	C3	C465	B2	C595	C3	R114	A1	R660	C3	TP63	C4		
C358	C3	C466	B3	C596	C3	R117	A1	R662	C3	TP64	C4		
C361	C2	C467	C2	C597	C4	R202	C4	R663	C3	TP65	C4		
C362	C2	C468	B2	C598	C3	R203	C4	R664	C3	TP66	C4		
C363	C2	C469	B2	C599	C4	R204	C4	R671	C3	U155	C2		
C370	C2	C470	B3	C600	D4	R205	C4	R705	D1	U352	C2		
C401	B2	C471	C2	C768	D4	R206	C4	R707	D1	U725	D2		
C402	C3	C472	B2	C769	D4	R207	C4	R709	D1	U760	C4		
C403	C3	C473	B2	C770	D4	R208	C4	R711	D1	ZD10	D3		
C404	C3	C501	A2	C771	D3	R209	D4	R750	D2	ZD11	D3		
C405	C3	C508	B2	C772	D3	R210	C5	R753	D2	ZD12	D4		
C406	B3	C509	B2	C773	D3	R211	D5	R757	D1	ZD13	D3		
C407	C3	C510	B2	C774	C3	R213	C4	R758	D1	ZD14	D4		
C408	C3	C511	B2	C775	C3	R216	C4	R760	C4	ZD15	D3		
C409	C3	C512	B2	C776	C3	R217	D4	R761	A3	ZD16	D3		
C410	C3	C513	B2	C777	C4	R219	D4	R762	C4	ZD17	D2		
C411	C3	C514	B2	C778	C4	R220	D4	R763	C4	ZD18	D2		
C412	C3	C515	B2	C779	C4	R263	B4	R764	C4	ZD19	D2		
C414	B3	C516	B2	C780	C4	R264	B4	R765	C4	ZD20	D2		
C415	B3	C517	B2	C781	C4	R265	B4	R766	C4	ZD21	D2		
C416	B3	C520	B2	C782	C4	R301	B3	R767	C3	ZD22	D2		
C417	C3	C521	B2	C783	C3	R302	B3	R768	C3	ZD23	D2		
C418	C3	C522	B2	C784	C4	R303	B3	R769	C3	ZD24	D2		
C419	C3	C523	B2	C787	C4	R304	B3	R770	C3	ZD701	D1		

7. Circuit Diagrams and PWB Layouts

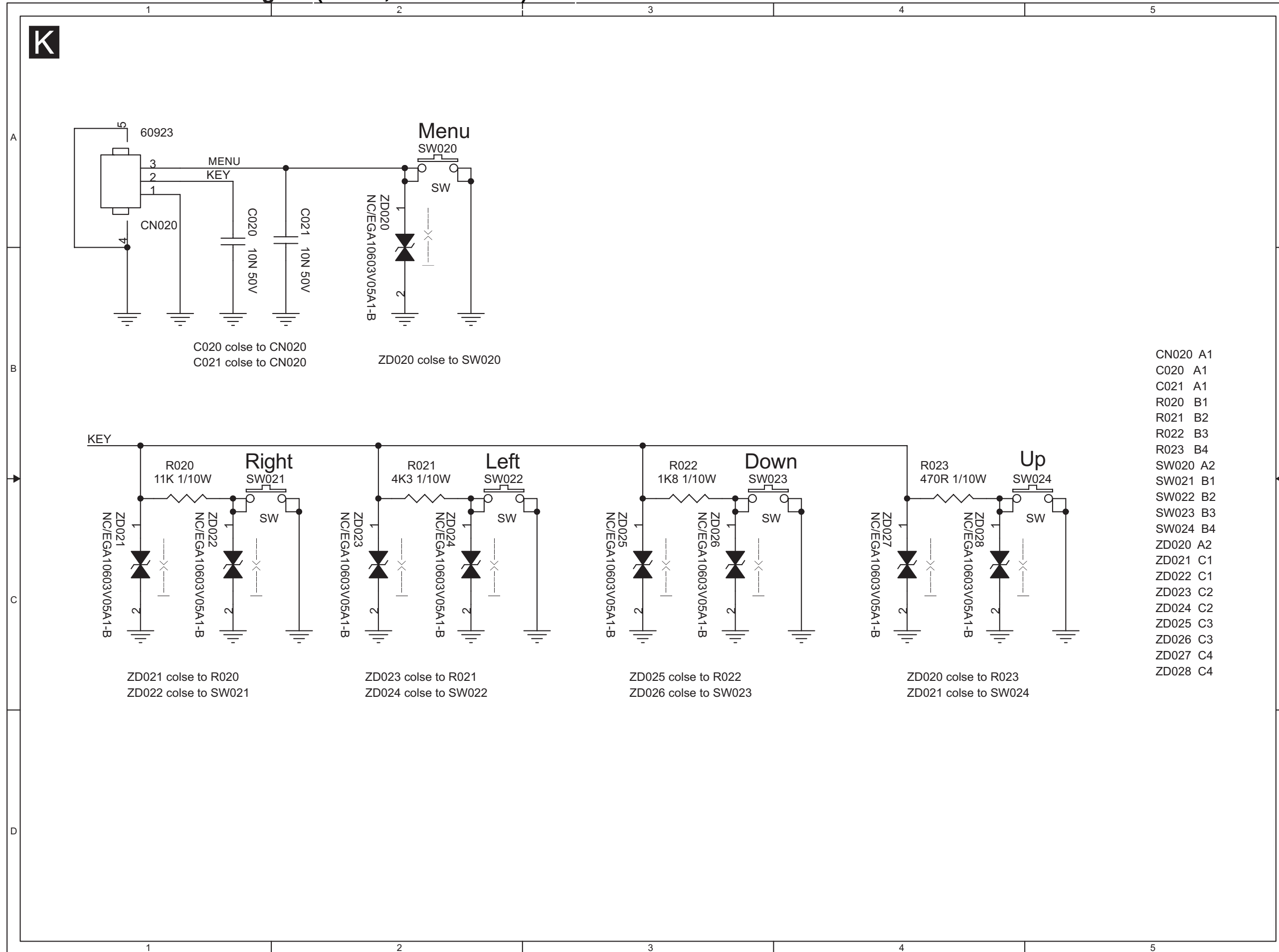
Waveform Diagram



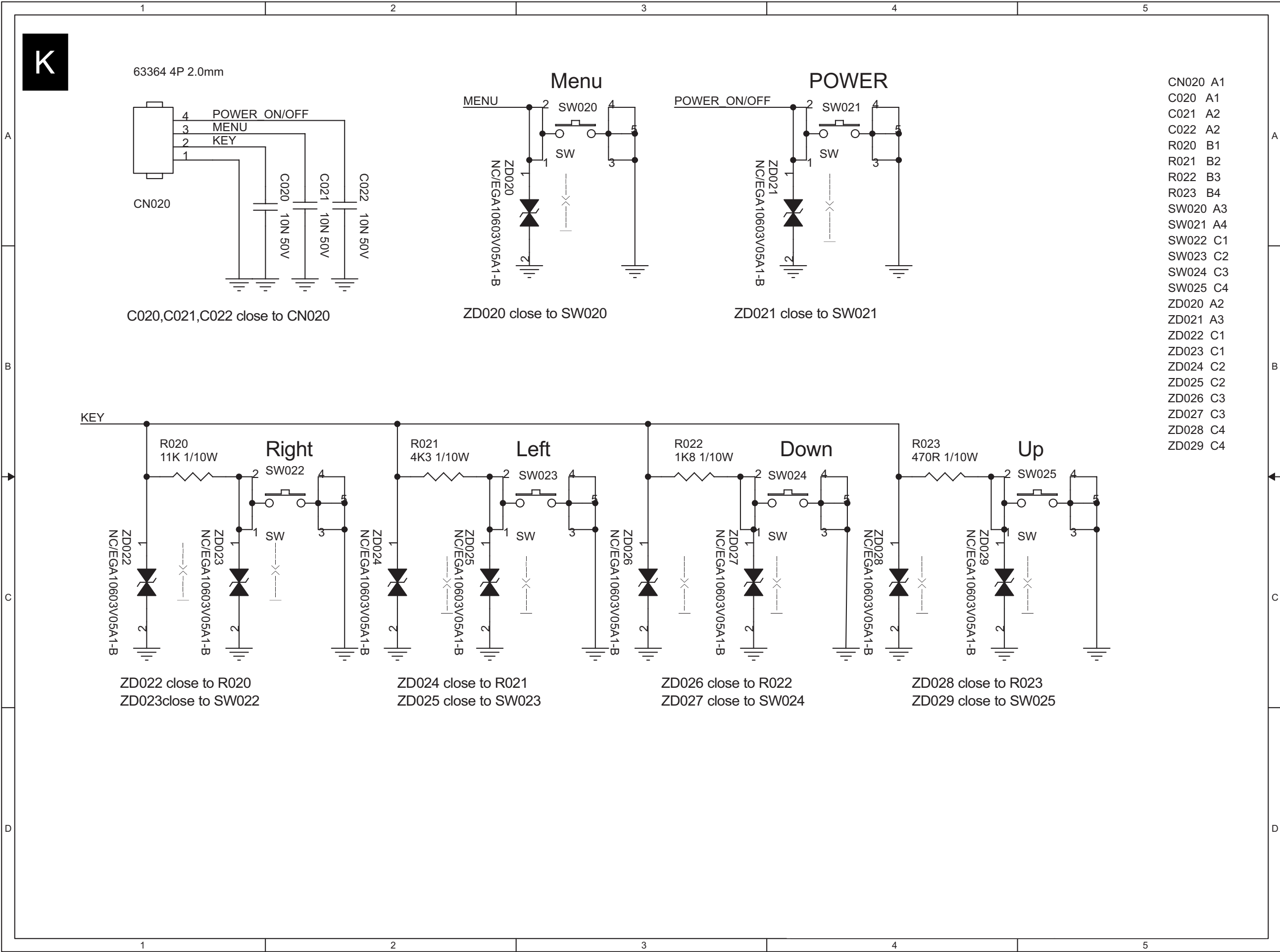
Waveform Diagram



KEY Board Schematic Diagram(for 15", 19MF&19MD)

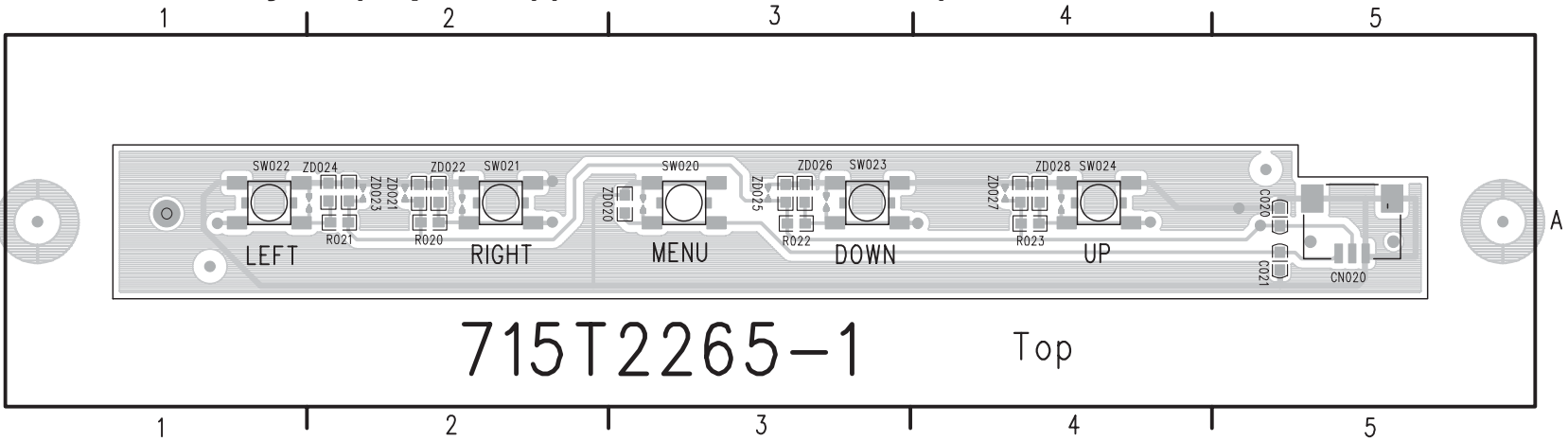


KEY Board Schematic Diagram(for 19PFL)

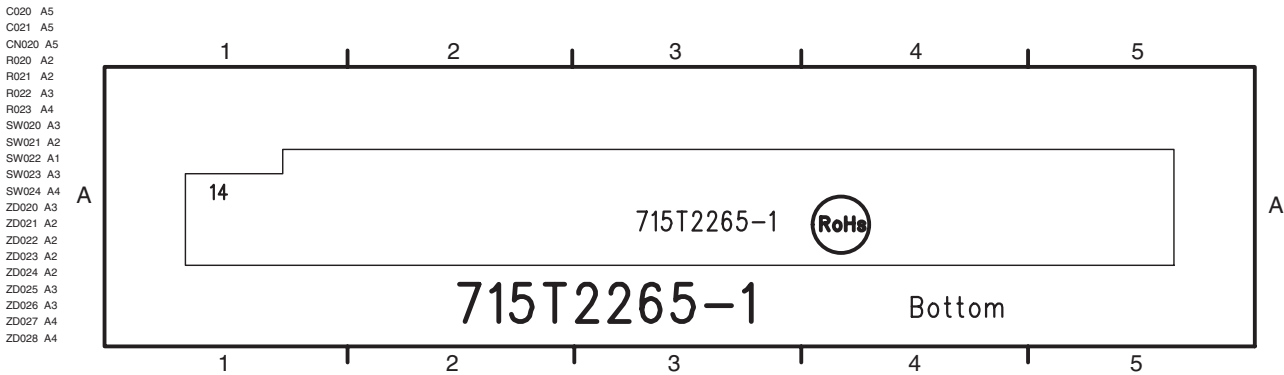


7. Circuit Diagrams and PWB Layouts

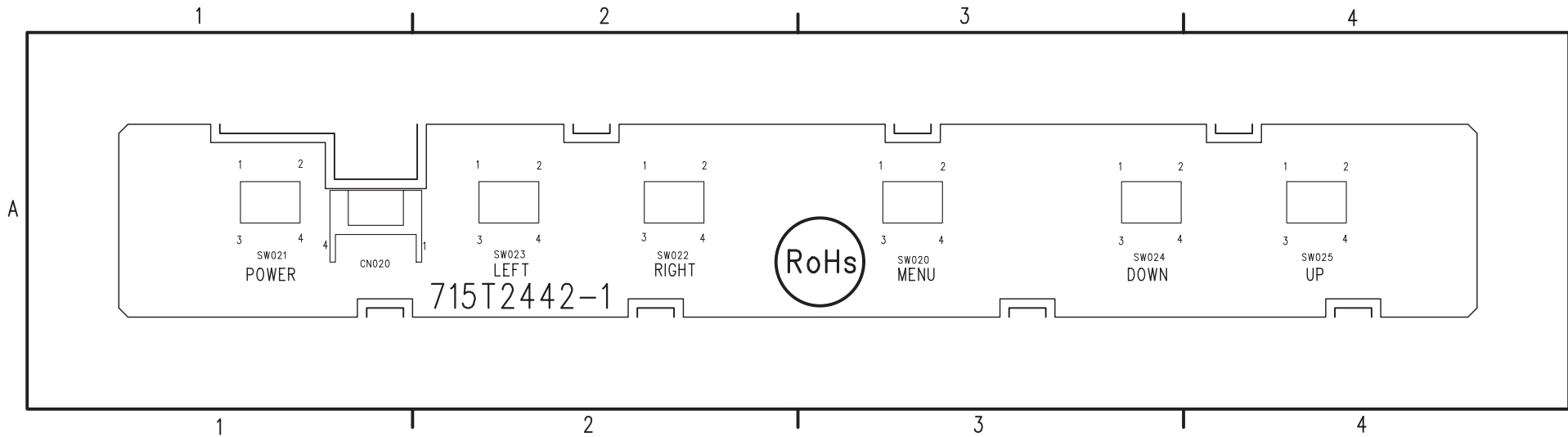
KEY Board Layout(Top Side)(for 15",19MF&19MD)



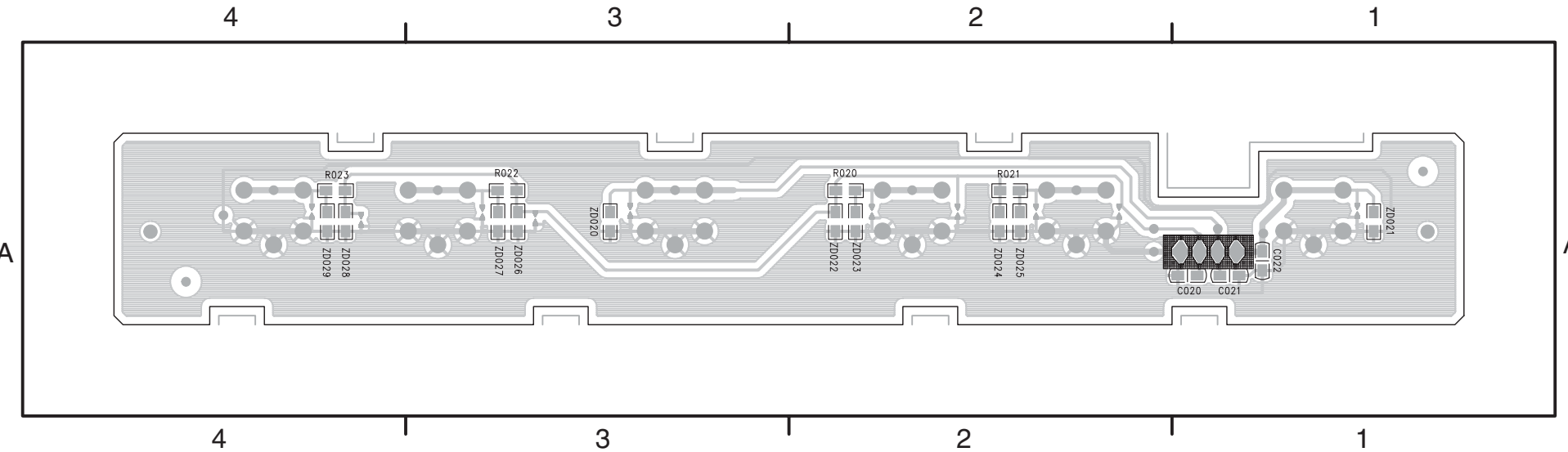
KEY Board Layout(Bottom Side)(for 15",19MF&19MD)



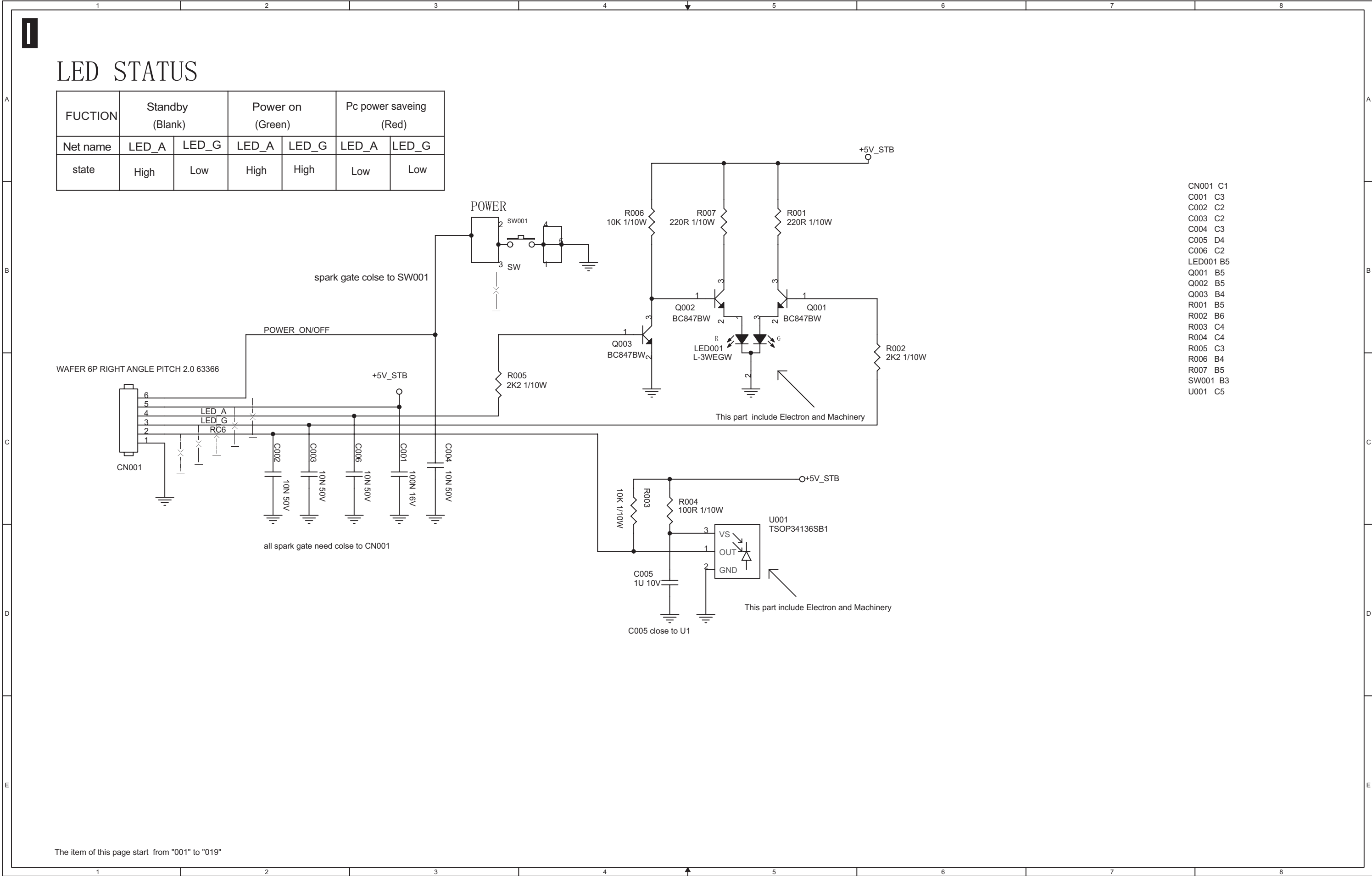
KEY Board Layout(Top Side)(for 19PFL)



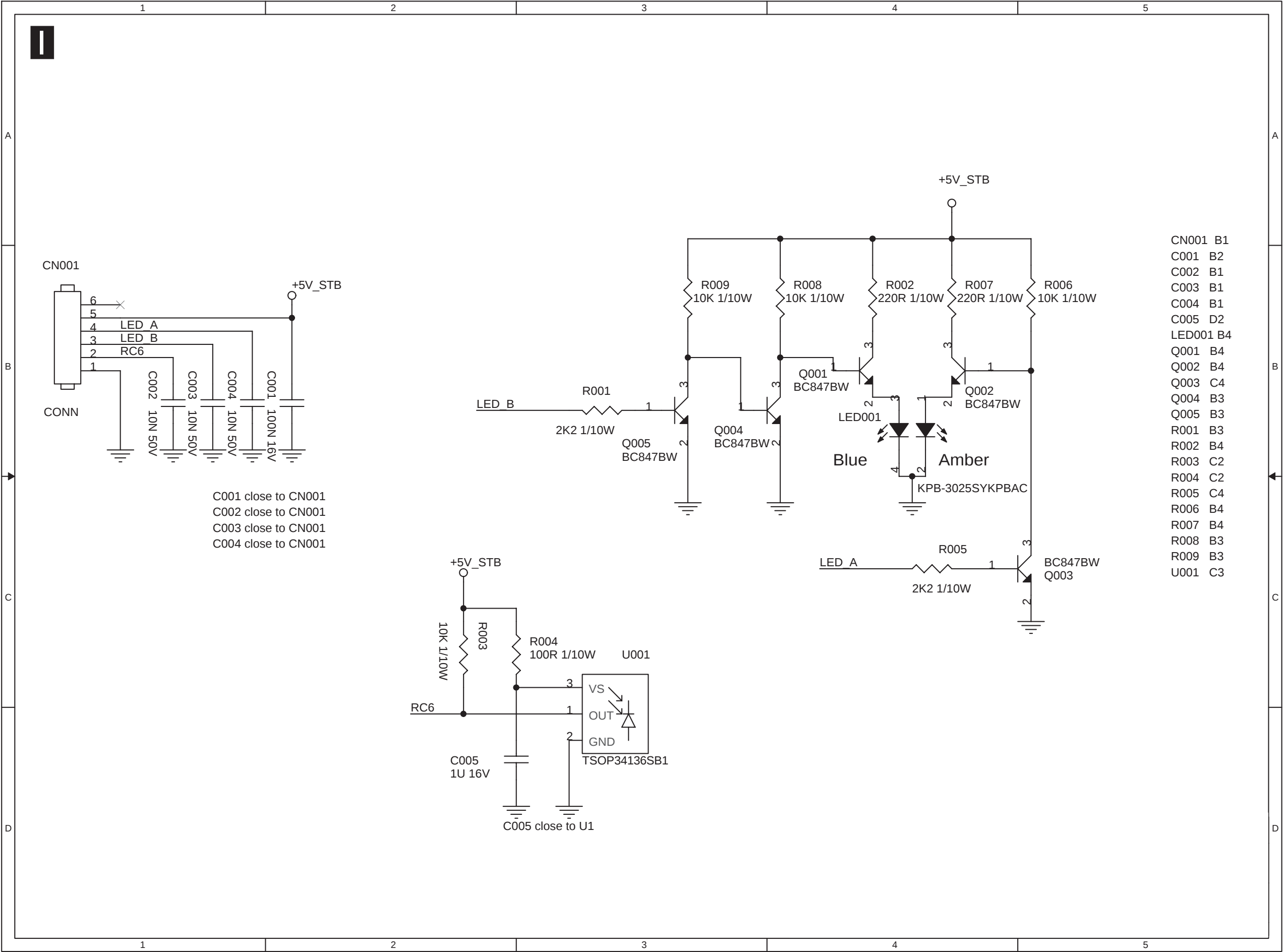
KEY Board Layout(Bottom Side)(for 19PFL)



IR Board Schematic Diagram (for 15",19MF&19MD)

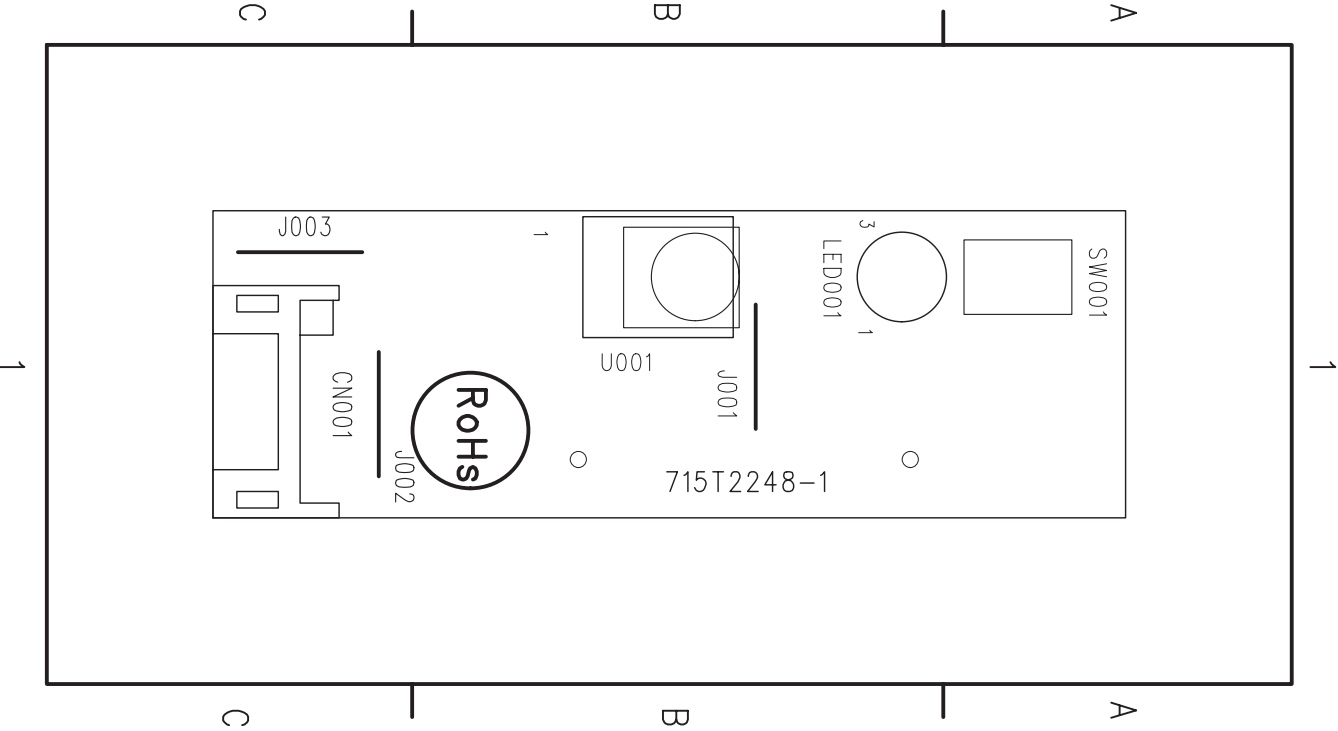


IR Board Schematic Diagram(for 19PFL)



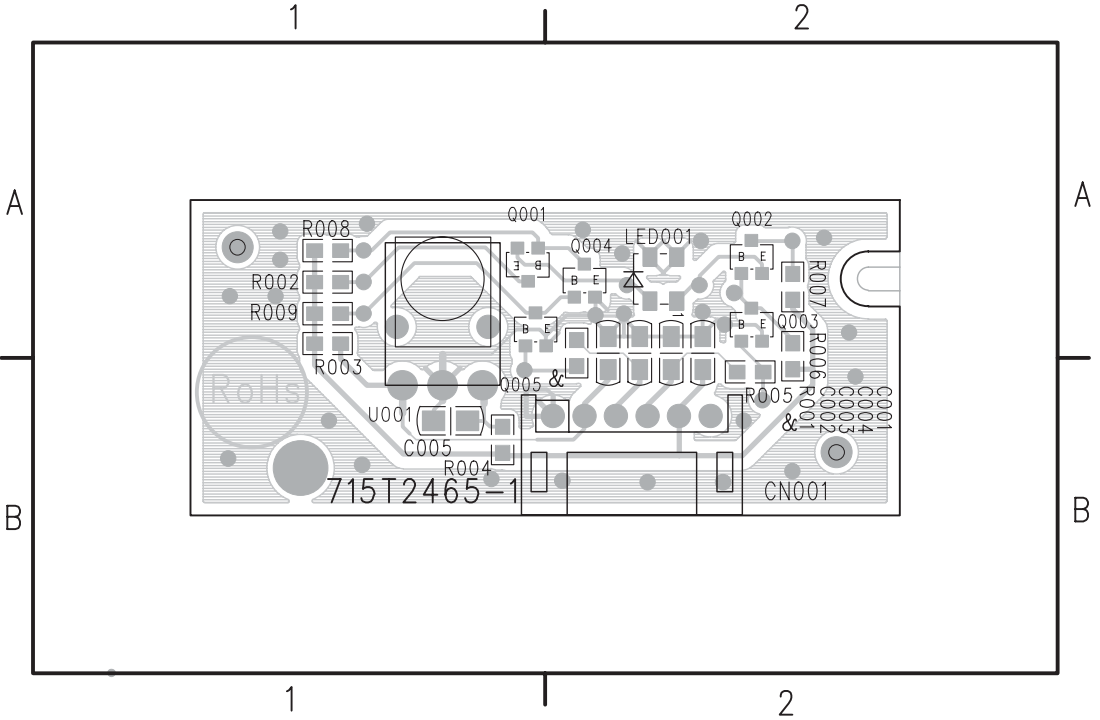
7.Circuit Diagrams and PWB Layouts

IR Board Layout(Top Side)(for 15",19MF&19MD)



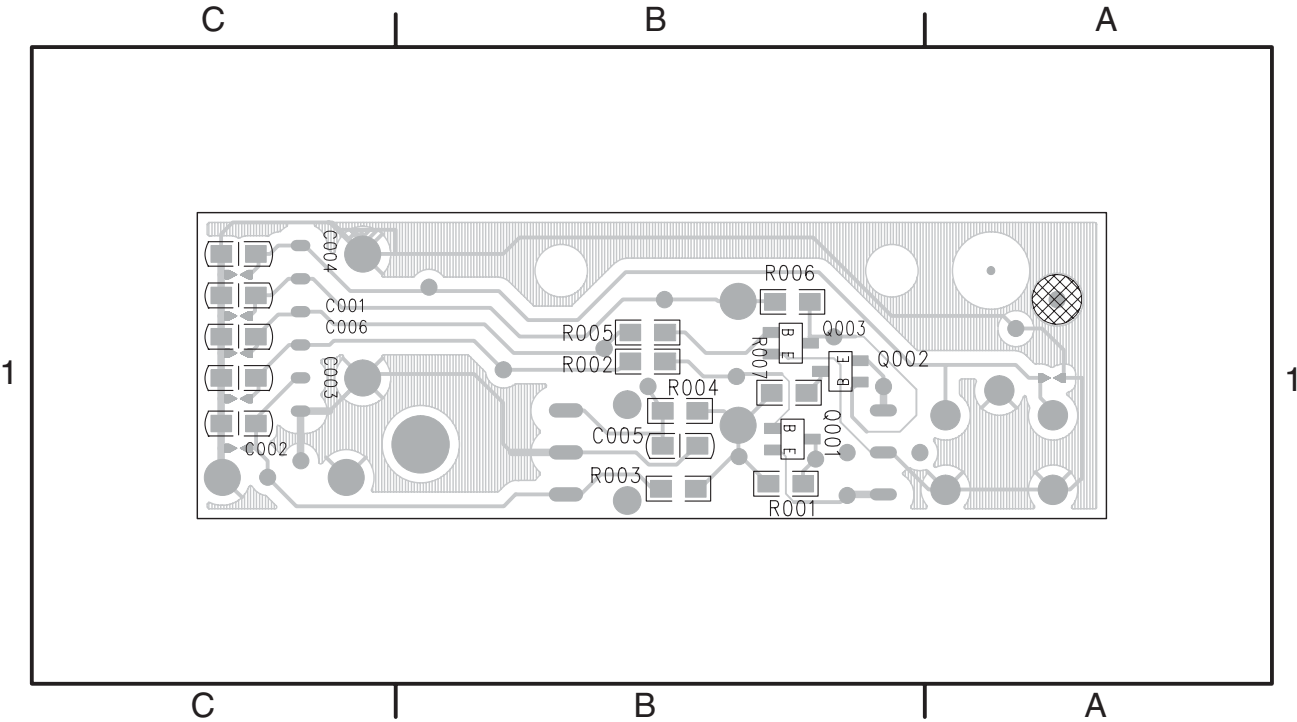
IR Board Layout(Top Side)(for 19PFL)

CN001 C1
J001 B1
J002 C1
J003 C1
LED001 A1
SW001 A1
U001 B1



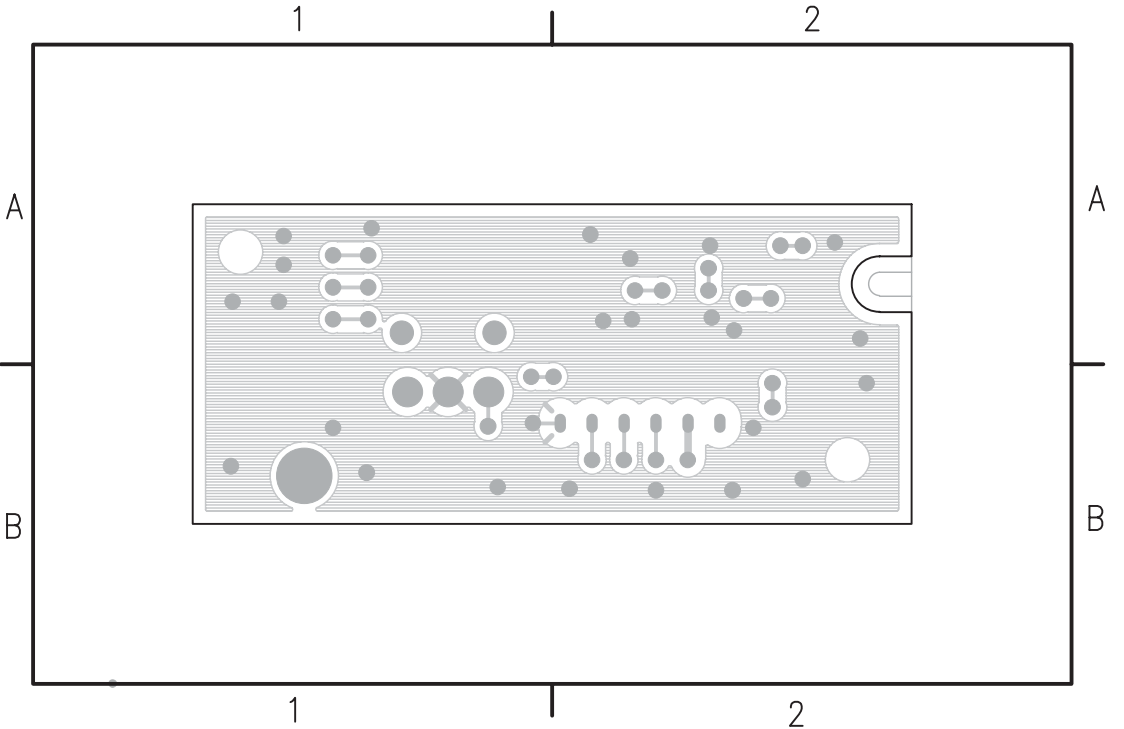
C001 A2 Q005 A1
C002 A2 R001 A2
C003 A2 R002 A1
C004 A2 R003 A1
C005 B1 R004 B1
CN001 B2 R005 B2
LED001 A2 R006 A2
Q001 A1 R007 A2
Q002 A2 R008 A1
Q003 A2 R009 A1
Q004 A2 U001 A1

IR Board Layout(Bottom Side)(for 15",19MF&19MD)

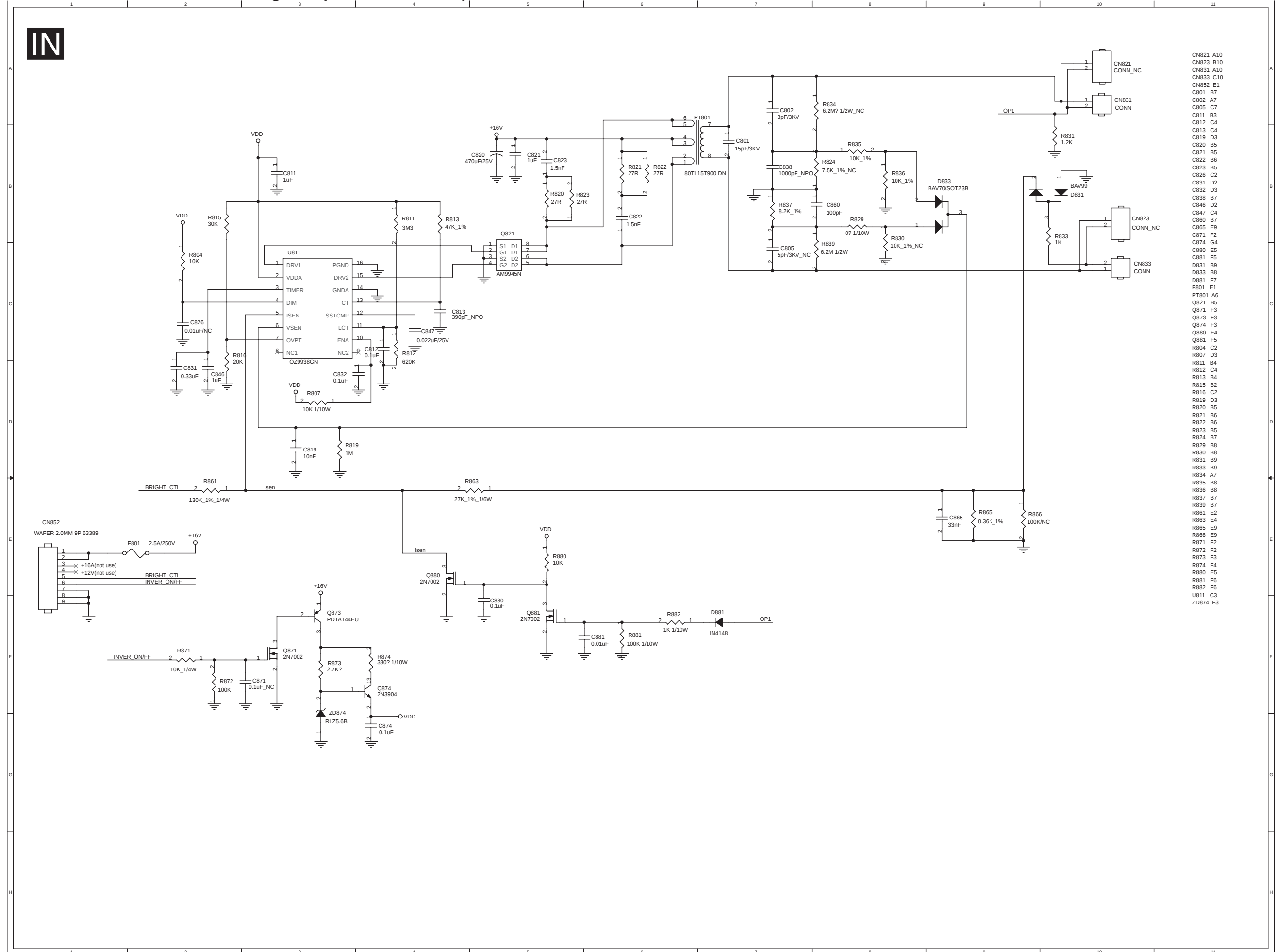


IR Board Layout(Bottom Side)(for 19PFL)

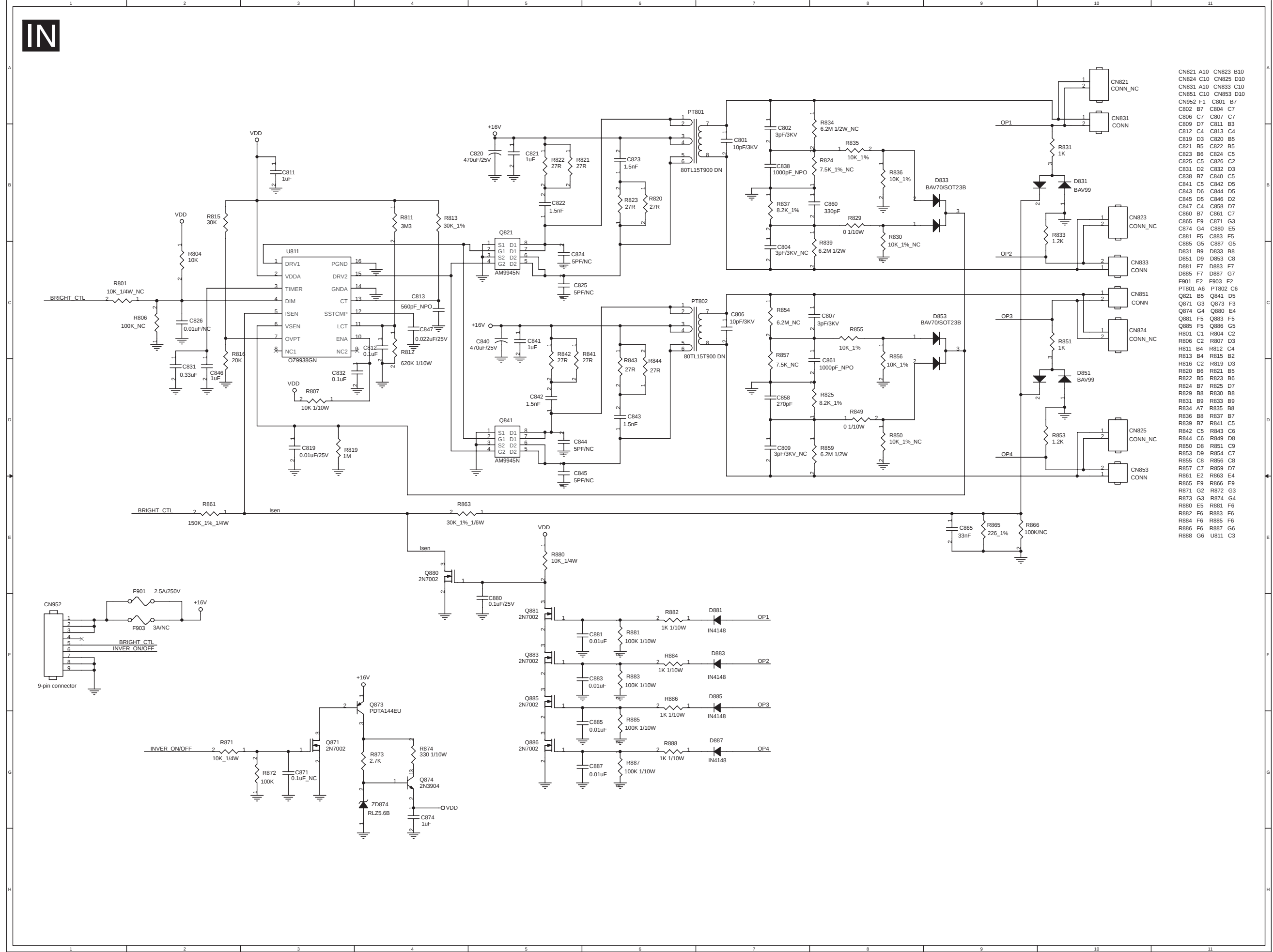
C001 C1
C002 C1
C003 C1
C004 C1
C005 B1
C006 C1
Q001 B1
Q002 B1
Q003 B1
R001 B1
R002 B1
R003 B1
R004 B1
R005 B1
R006 B1
R007 B1



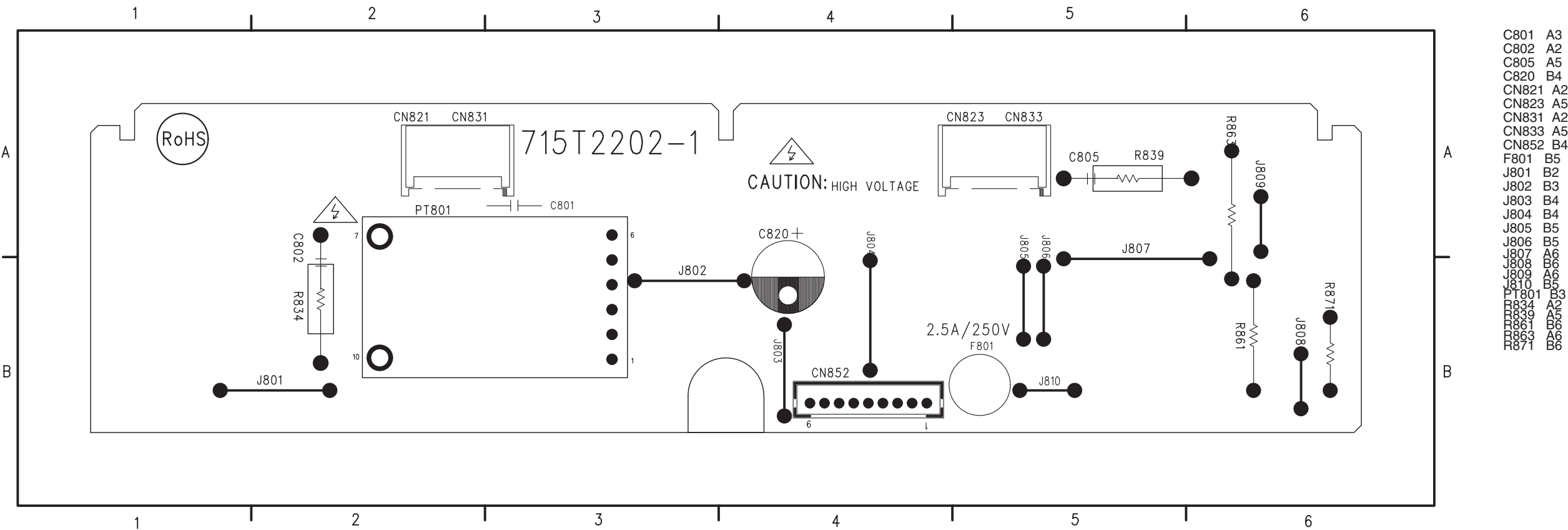
Inverter Board Schematic Diagram(for 15MF237S)



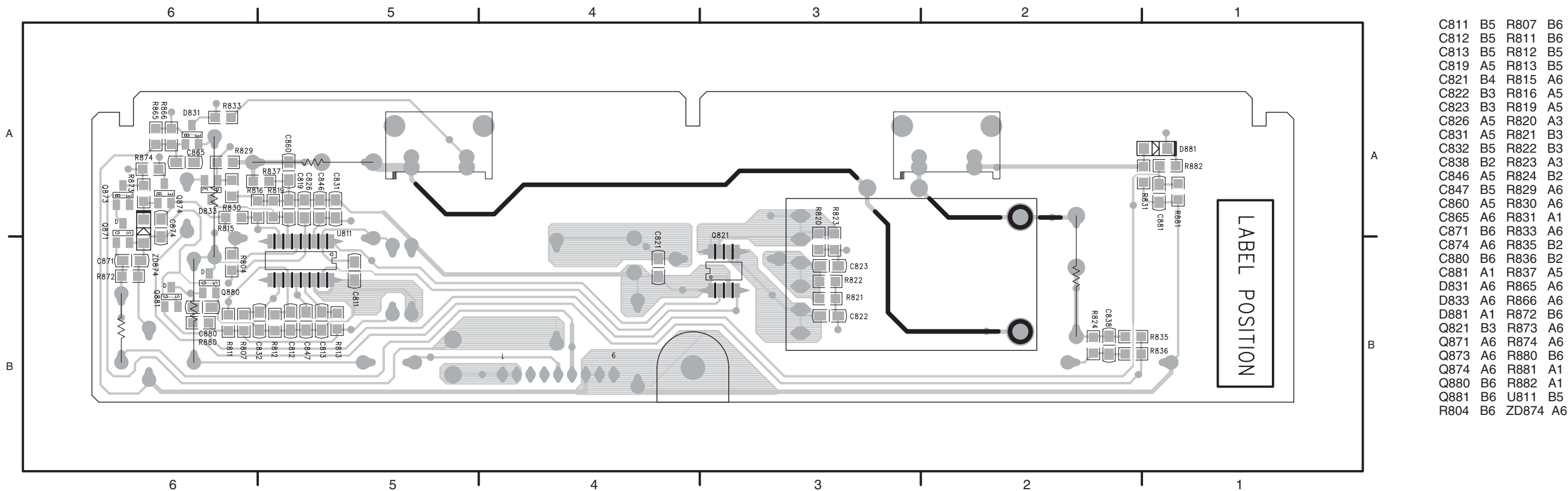
Inverter Board Schematic Diagram(for 15MF227B)



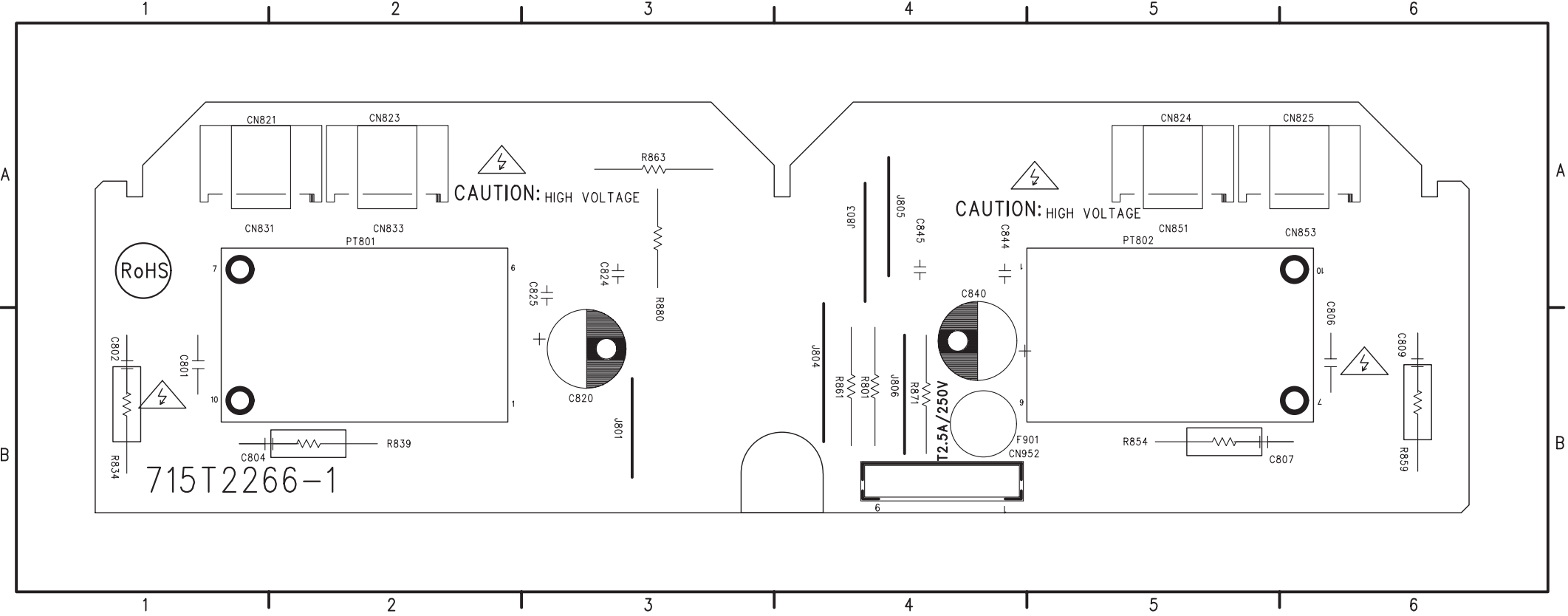
Inverter Board Layout(Top Side for 15MF237S)



Inverter Board Layout(Bottom Side for 15MF237S)

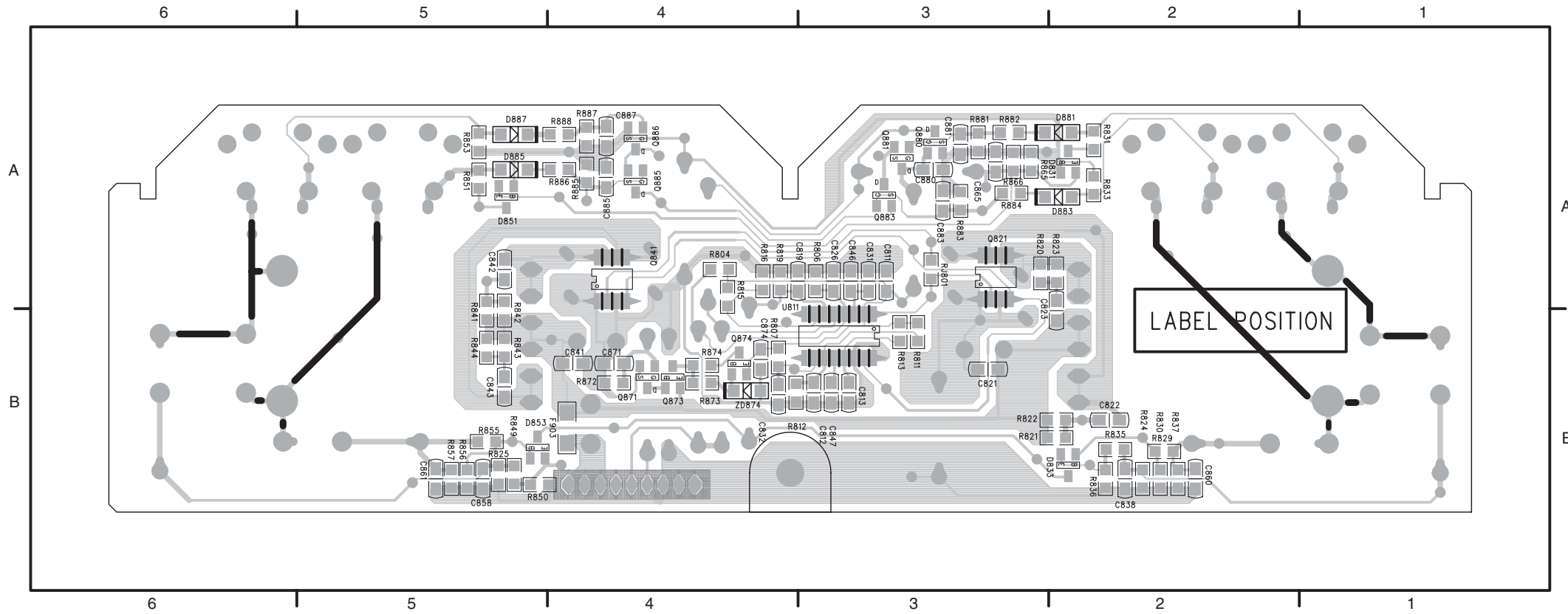


Inverter Board Layout(Top Side for 15MF227B)



C801	B1	CN853	A6
C802	B1	CN952	B4
C804	B1	F901	B4
C806	B6	J801	B3
C807	B5	J803	A4
C809	B6	J804	B4
C820	B3	J805	A4
C824	A3	J806	B4
C825	A3	PT801	B2
C840	B4	PT802	B5
C844	A4	R801	B4
C845	A4	R834	B1
CN821	A1	R839	B2
CN823	A2	R854	B6
CN824	A5	R859	B6
CN825	A6	R861	B4
CN831	A1	R863	A3
CN833	A2	R871	B4
CN851	A5	R880	A3

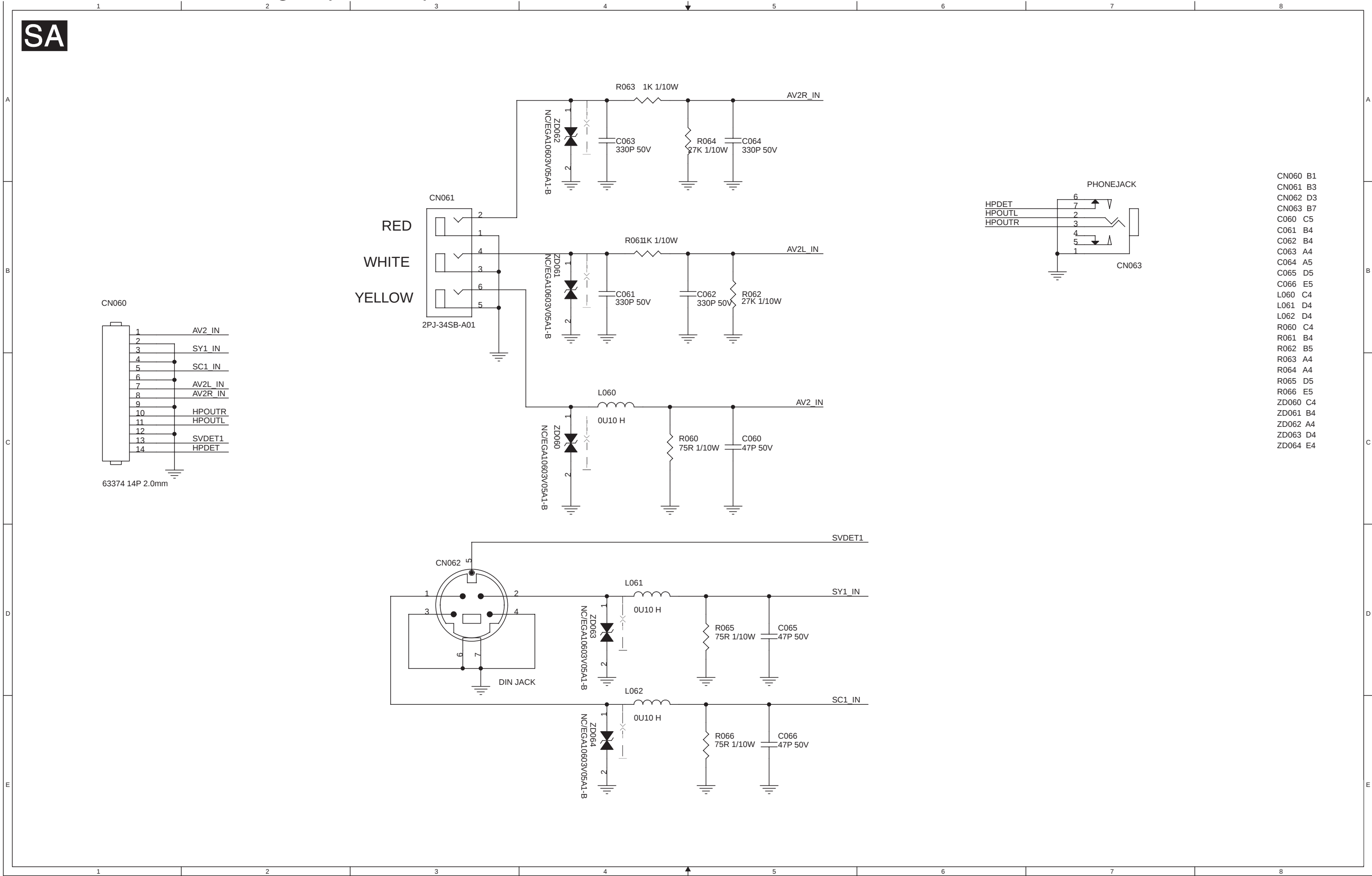
Inverter Board Layout(Bottom Side for 15MF227B)



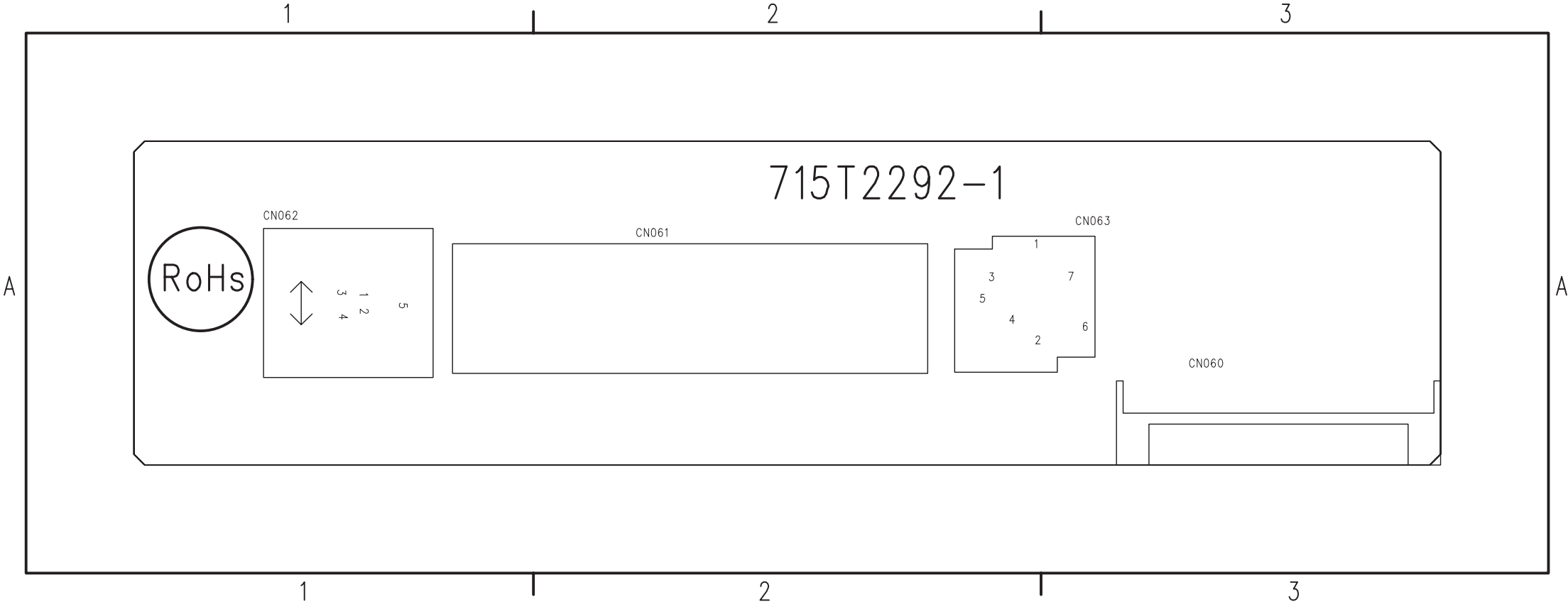
C811	A3	D883	A2	R833	A2
C812	B3	D885	A5	R835	B2
C813	B3	D887	A5	R836	B2
C819	A3	F903	B4	R837	B2
C821	B3	Q821	A3	R841	B5
C822	B2	Q841	A4	R842	B5
C823	B2	Q871	B4	R843	B5
C826	A3	Q873	B4	R844	B5
C831	A3	Q874	B4	R849	B5
C832	B4	Q880	A3	R850	B4
C838	B2	Q881	A3	R851	A5
C841	B4	Q883	A3	R853	A5
C842	A5	Q885	A4	R855	B5
C843	B5	Q886	A4	R856	B5
C846	A3	R804	A4	R857	B5
C847	B3	R806	A3	R865	A3
C858	B5	R807	B4	R866	A3
C860	B2	R811	B3	R872	B4
C861	B5	R812	B3	R873	B4
C865	A3	R813	B3	R874	B4
C871	B4	R815	A4	R881	A3
C874	B4	R816	A4	R882	A3
C880	A3	R819	A4	R883	A3
C881	A3	R820	A3	R884	A3
C883	A3	R821	B2	R885	A4
C885	A4	R822	B2	R886	A4
C887	A4	R823	A2	R887	A4
D831	A2	R824	B2	R888	A4
D833	B2	R825	B5	RJ801	A3
D851	A5	R829	B2	U811	B3
D853	B4	R830	B2	ZD874	B4
D881	A2	R831	A2		

7. Circuit Diagrams and PWB Layouts

Side AV Board Schematic Diagram(for 19PFL)

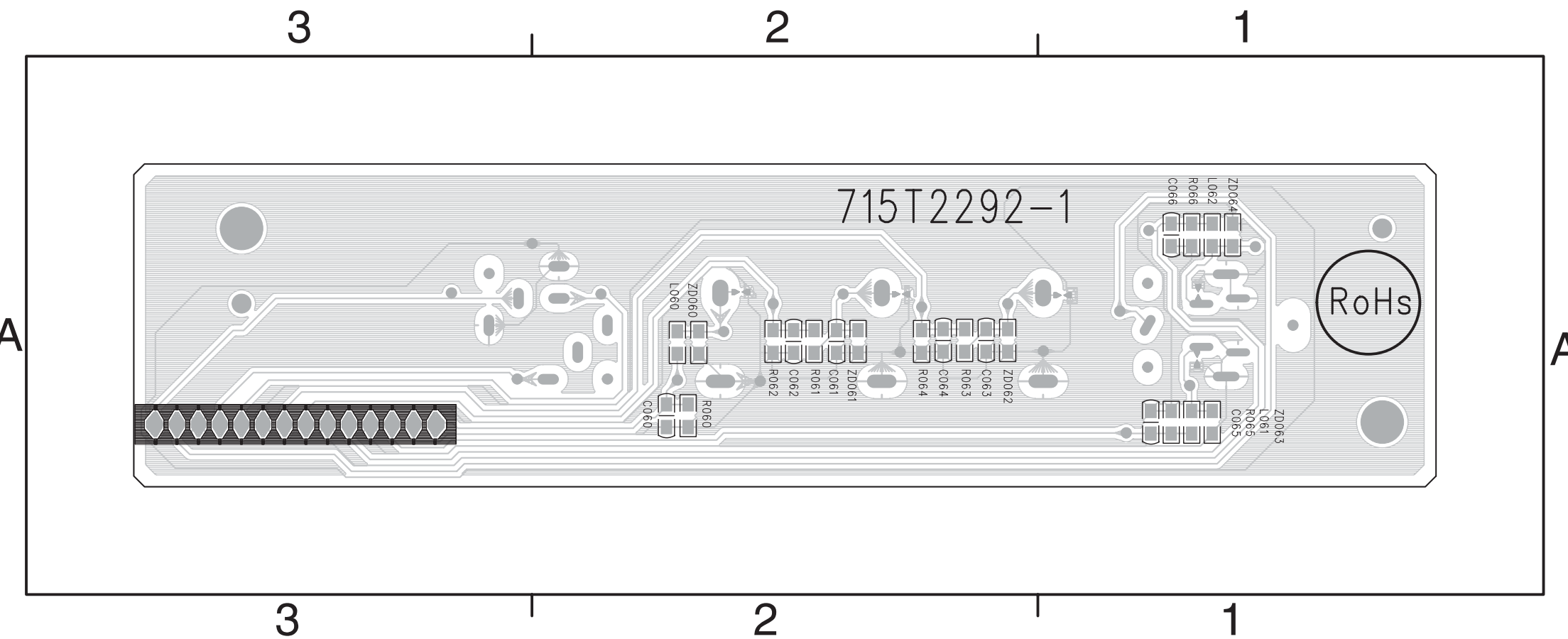


Side AV Board Layout(Top Side for 19PFL)



CN060 A3
CN061 A2
CN062 A1
CN063 A2

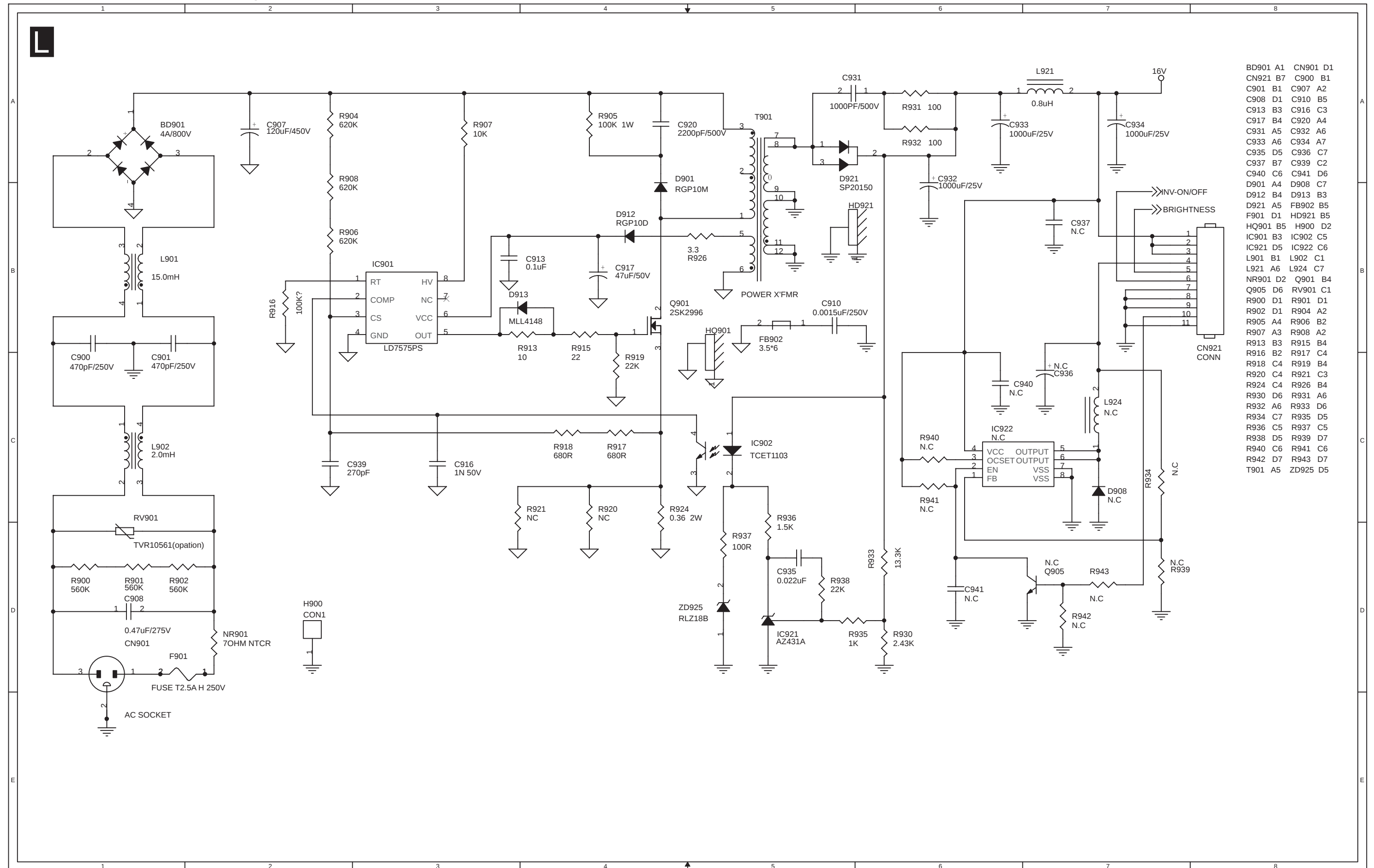
Side AV Board Layout(Bottom Side for 19PFL)



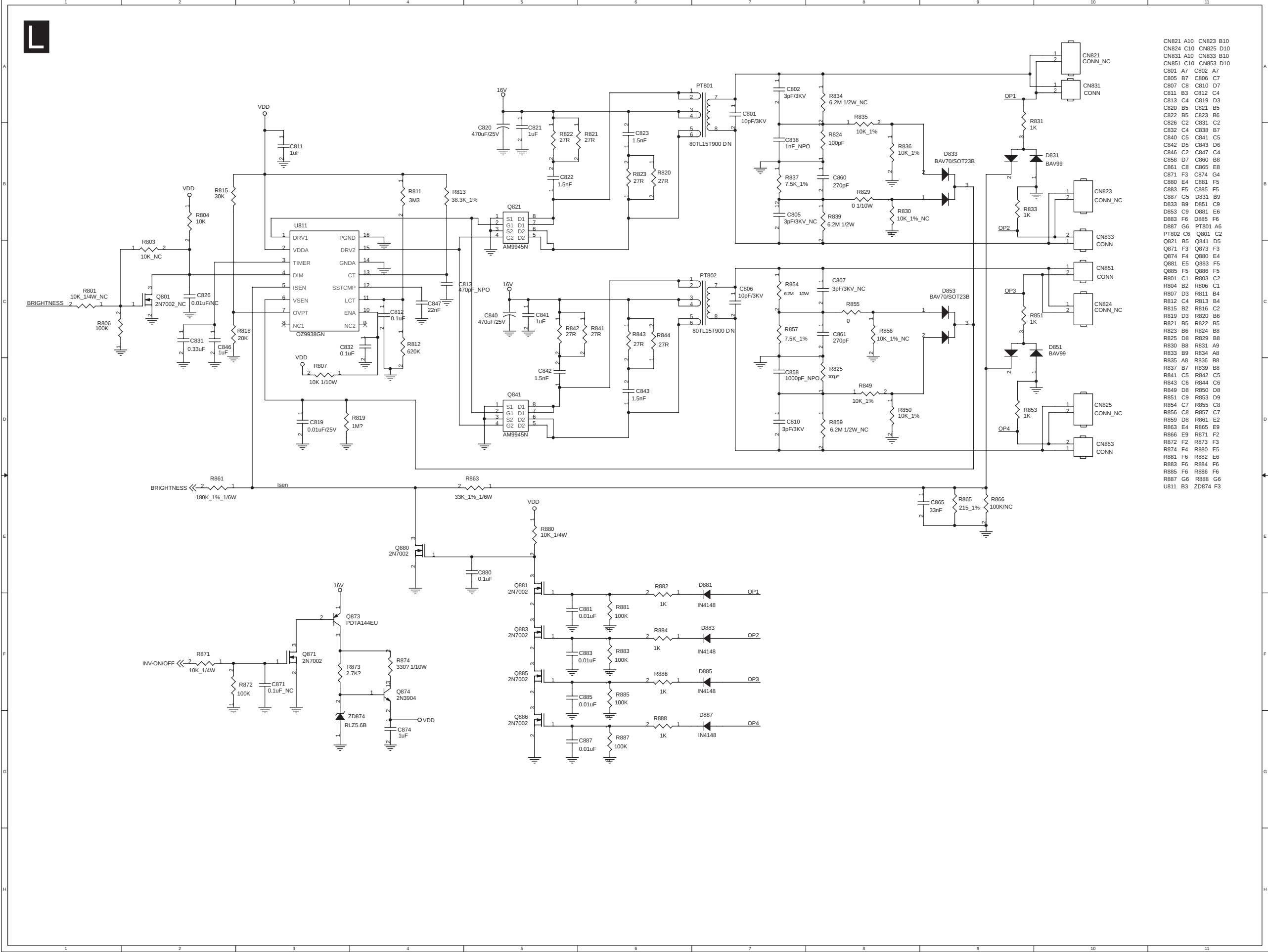
C060 A2 R061 A2
C061 A2 R062 A2
C062 A2 R063 A2
C063 A2 R064 A2
C064 A2 R065 A1
C065 A1 R066 A1
C066 A1 ZD060 A2
L060 A2 ZD061 A2
L061 A1 ZD062 A2
L062 A1 ZD063 A1
R060 A2 ZD064 A1

7. Circuit Diagrams and PWB Layouts

LIPS Board Schematic Diagram(for 19" Wide)

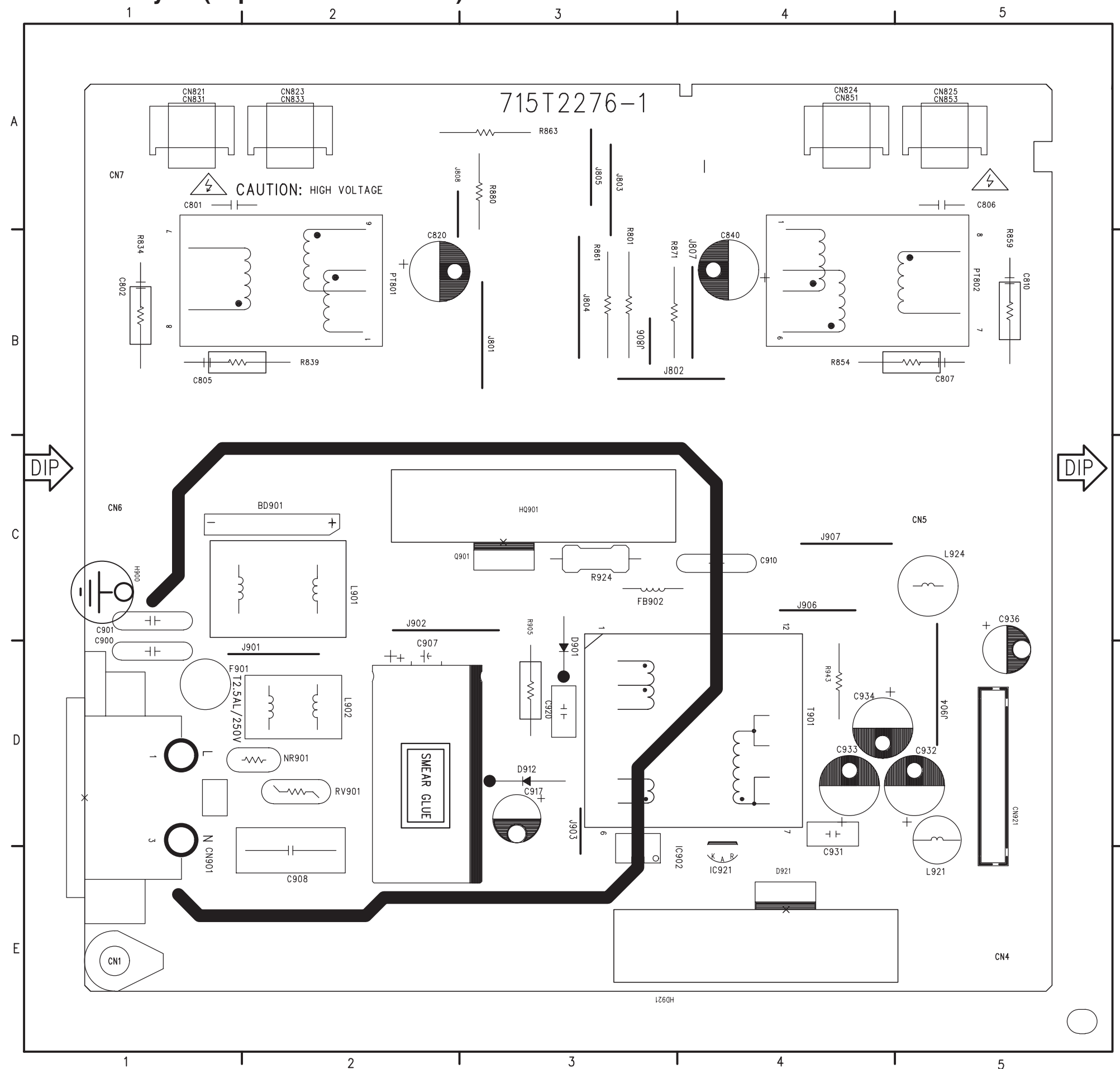


LIPS Board Schematic Diagram(for 19" Wide)



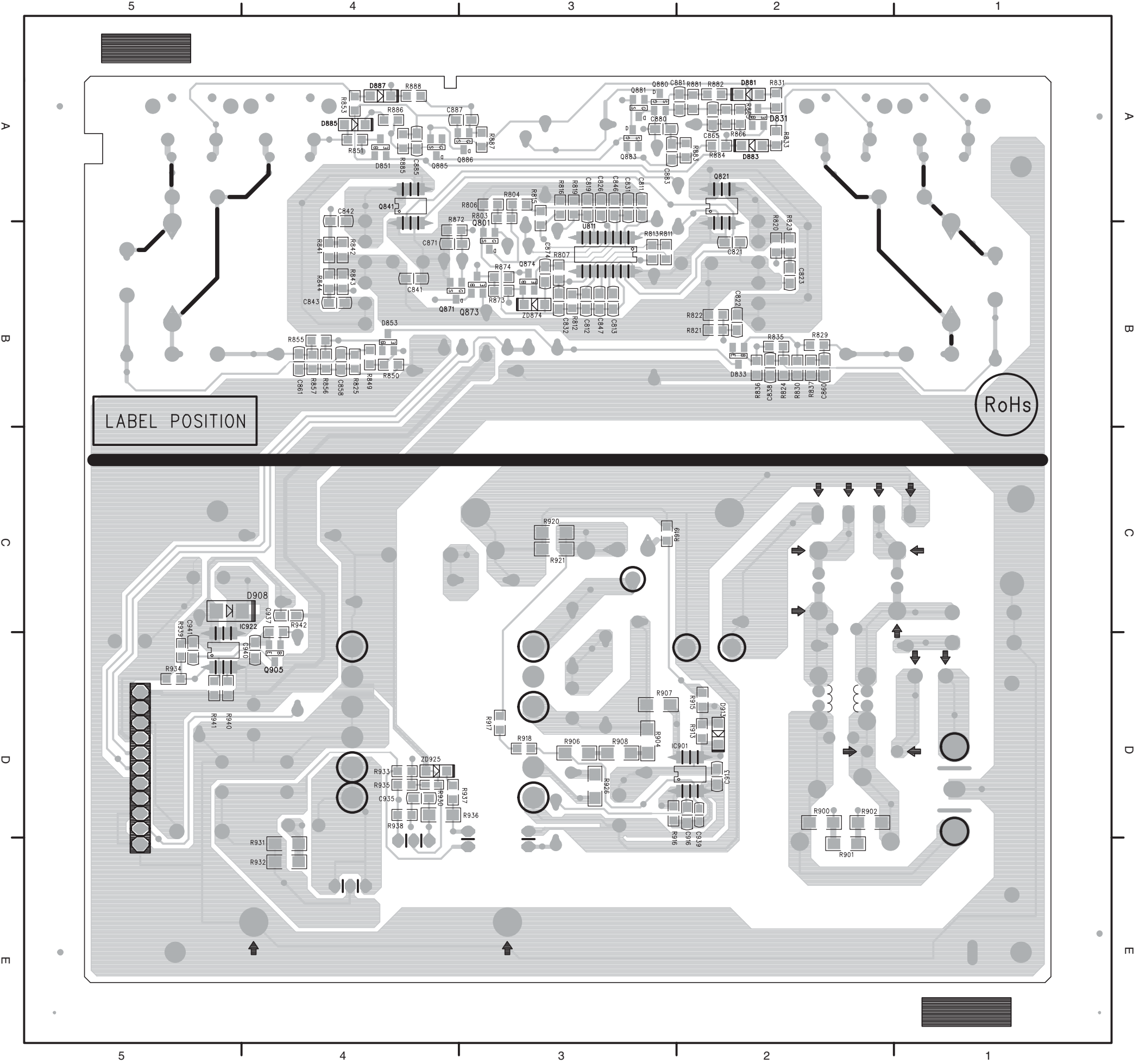
7. Circuit Diagrams and PWB Layouts

LIPS Board Layout(Top Side for 19" Wide)



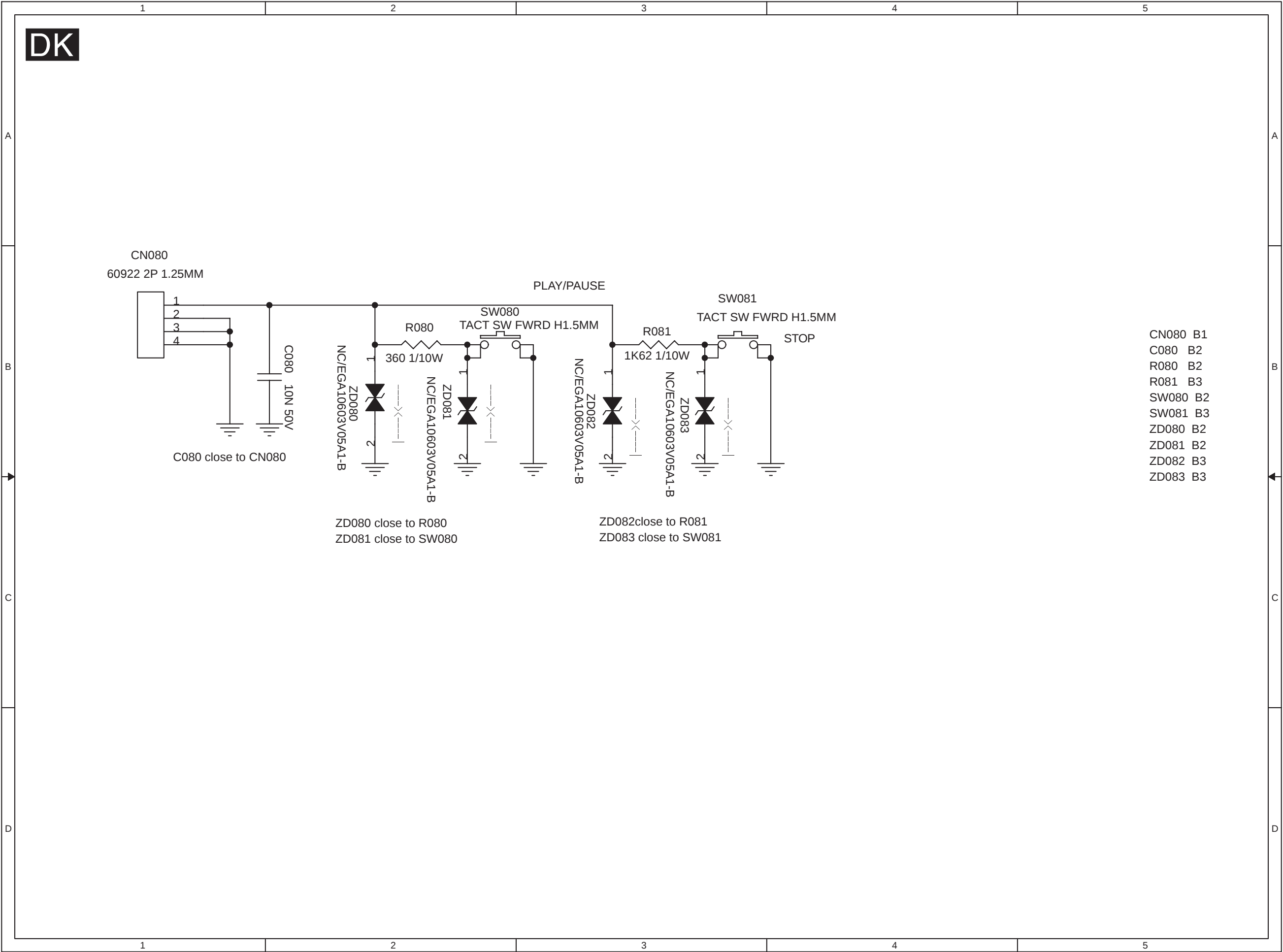
BD901	C2	HQ901	C3	T901	D4
C801	A1	IC902	E3		
C802	B1	IC921	E4		
C805	B1	J801	B3		
C806	A5	J802	B3		
C807	B5	J803	B3		
C810	B5	J804	B3		
C820	B2	J805	A3		
C840	B4	J806	B3		
C900	D1	J807	B4		
C901	C1	J808	B2		
C907	D2	J901	D1		
C908	E2	J902	C2		
C910	C4	J903	E3		
C917	D3	J904	D5		
C920	D3	J906	C4		
C931	D4	J907	C4		
C932	D5	L901	C2		
C933	D4	L902	D2		
C934	D4	L921	D5		
C936	D5	L924	C5		
CN821	A1	NR901	D2		
CN823	A2	PT801	B2		
CN824	A4	PT802	B4		
CN825	A5	Q901	C3		
CN831	A1	R801	B3		
CN833	A2	R834	B1		
CN851	A4	R839	B2		
CN853	A5	R854	B5		
CN901	D1	R859	B5		
CN921	D5	R861	B3		
D901	D3	R863	A2		
D912	D3	R871	B3		
D921	E4	R880	A3		
F901	D1	R905	D3		
FB902	C4	R924	C3		
H900	C1	R943	D4		
HD921	E4	RV901	D2		

LIPS Board Layout(Bottom Side for 19" Wide)

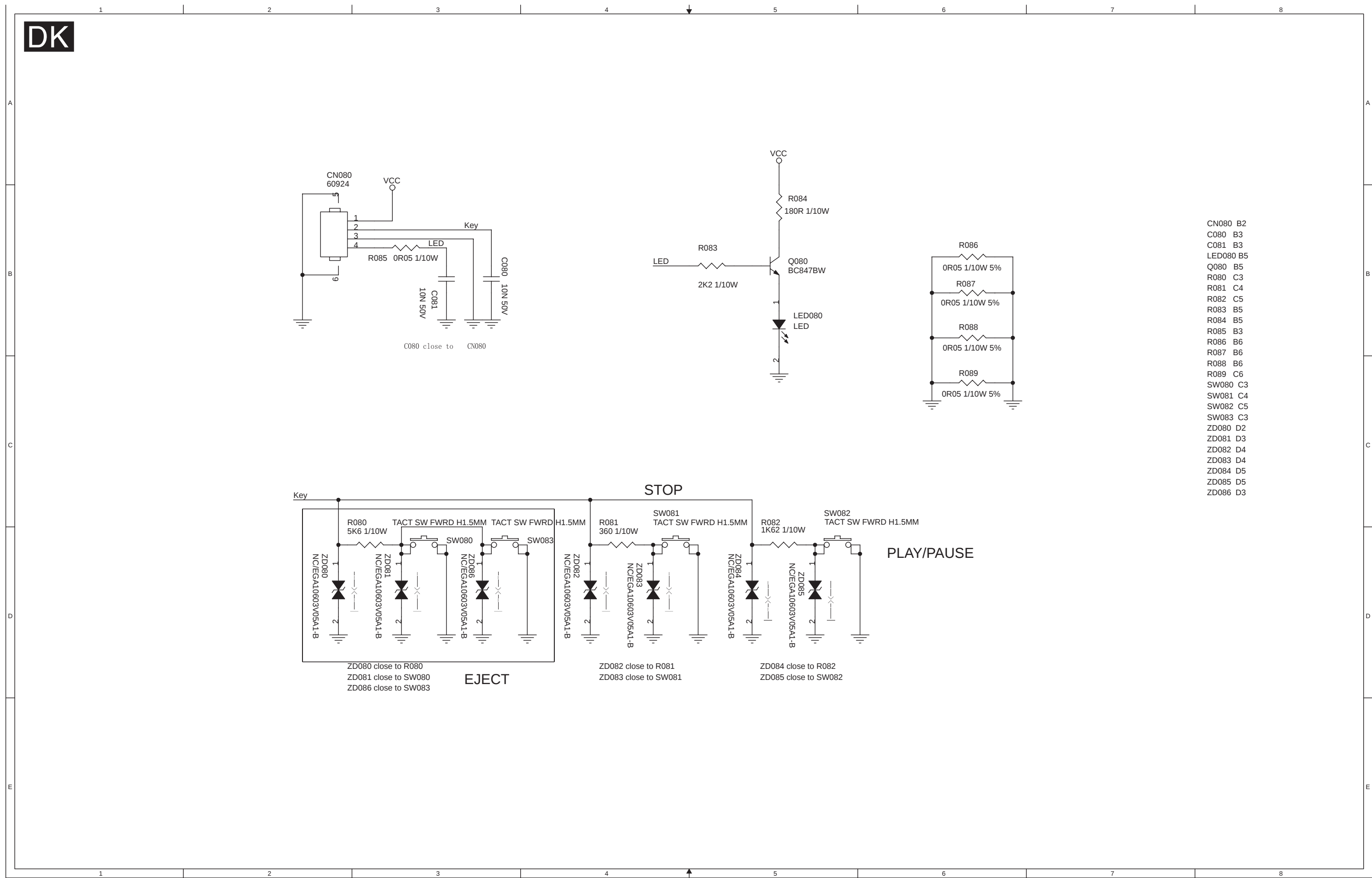


C811	A3	Q801	B3	R865	A2
C812	B3	Q821	A2	R866	A2
C813	B3	Q841	A4	R872	B4
C819	A3	Q871	B4	R873	B3
C821	B2	Q873	B3	R874	B3
C822	B2	Q874	B3	R881	A2
C823	B2	Q880	A3	R882	A2
C826	A3	Q881	A3	R883	A2
C831	A3	Q883	A3	R884	A2
C832	B3	Q885	A4	R885	A4
C838	B2	Q886	A3	R886	A4
C841	B4	Q905	D4	R887	A3
C842	A4	R803	A3	R888	A4
C843	B4	R804	A3	R900	D2
C846	A3	R806	A3	R901	E2
C847	B3	R807	B3	R902	D2
C858	B4	R811	B3	R904	D3
C860	B2	R812	B3	R906	D3
C861	B4	R813	B3	R907	D3
C865	A2	R815	A3	R908	D3
C871	B4	R816	A3	R913	D2
C874	B3	R819	A3	R915	D2
C880	A3	R820	B2	R916	D3
C881	A2	R821	B2	R917	D3
C883	A3	R822	B2	R918	D3
C885	A4	R823	B2	R919	C3
C887	A3	R824	B2	R920	C3
C913	D2	R825	B4	R921	C3
C916	D2	R829	B2	R926	D3
C935	D4	R830	B2	R930	D4
C937	C4	R831	A2	R931	E4
C939	D2	R833	A2	R932	E4
C940	D4	R835	B2	R933	D4
C941	D5	R836	B2	R934	D5
D831	A2	R837	B2	R935	D4
D833	B2	R841	B4	R936	D4
D851	A4	R842	B4	R937	D4
D853	B4	R843	B4	R938	D4
D881	A2	R844	B4	R939	D5
D883	A2	R849	B4	R940	D5
D885	A4	R850	B4	R941	D5
D887	A4	R851	A4	R942	C4
D908	C5	R853	A4	U811	B3
D913	D2	R855	B4	ZD874	B3
IC901	D2	R856	B4	ZD925	D4
IC922	D5	R857	B4		

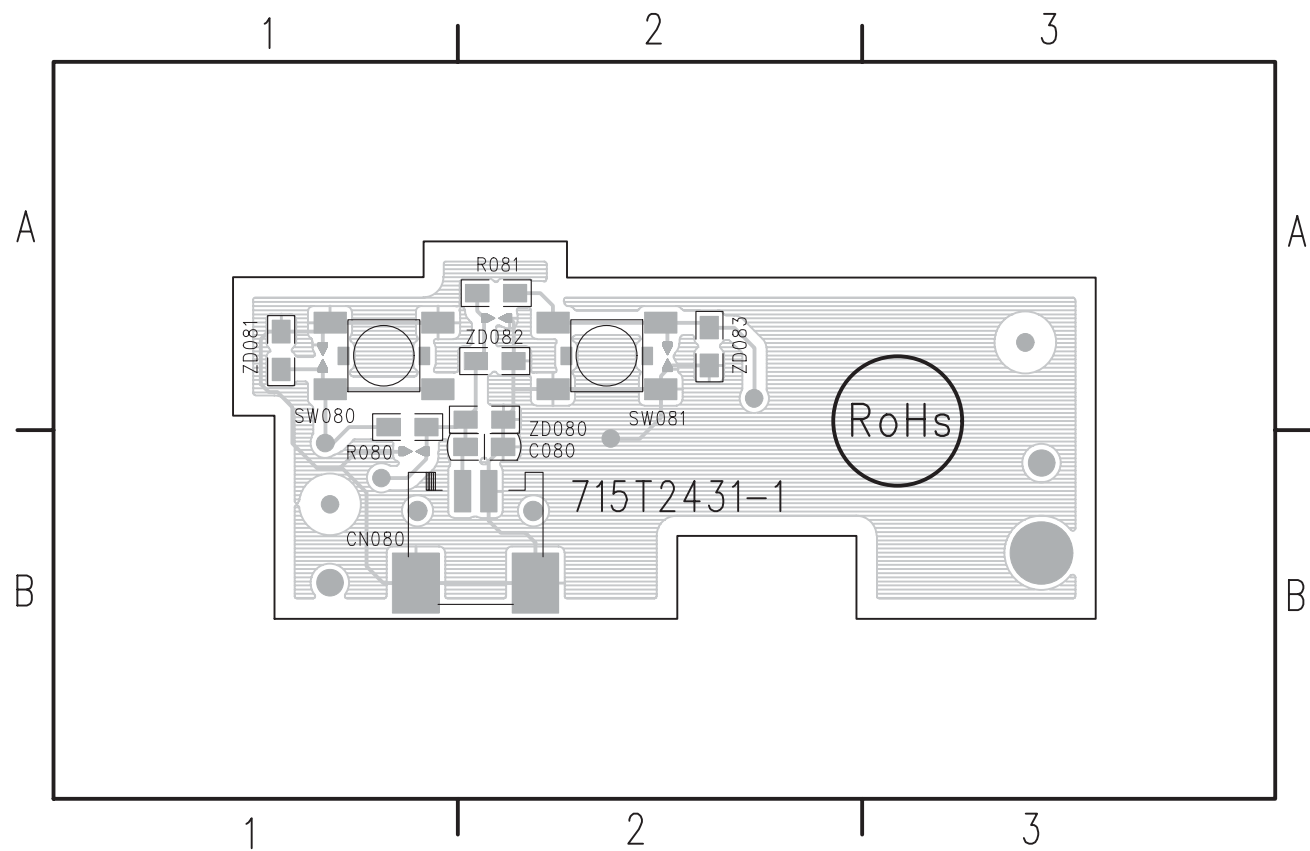
DVD KeyCtrl Board Schematic Diagram(for 19MD)



DVD KeyCtrl Board Schematic Diagram(for 19PFL5622)

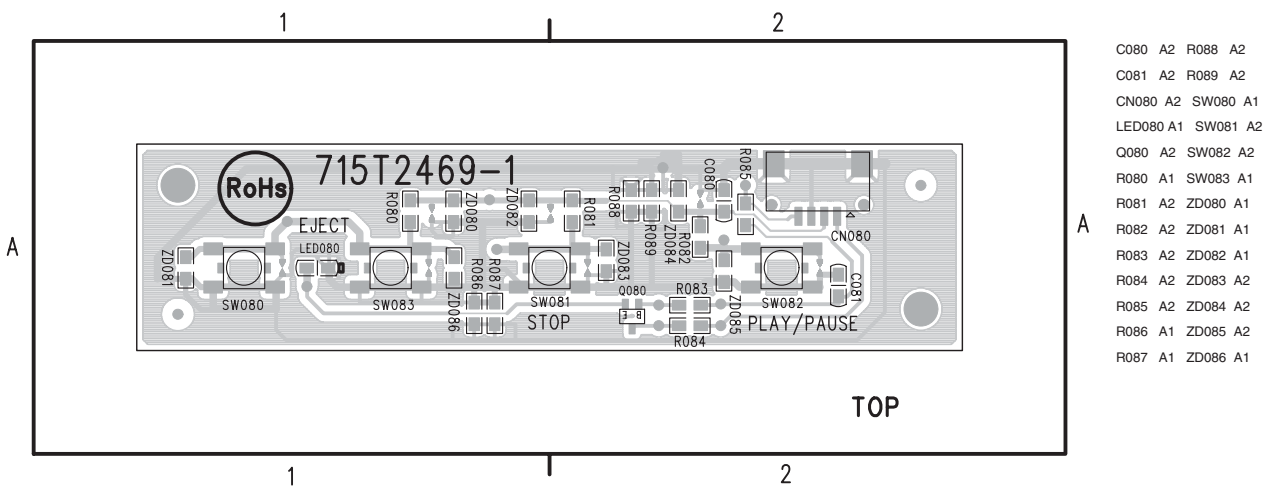


DVD KeyCtrl Board Layout(Top Side for 19MD)



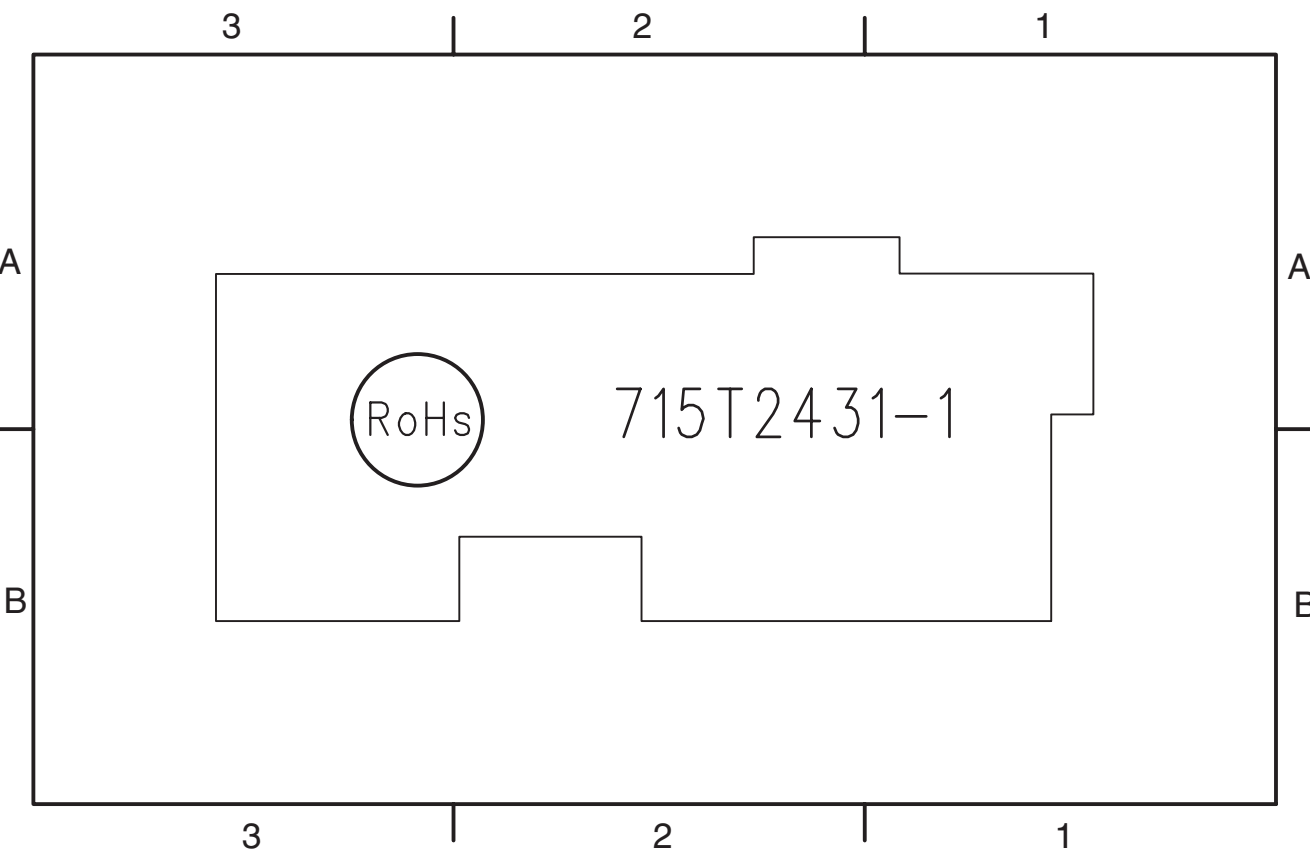
C080 B2
CN080 B2
R080 A1
R081 A2
SW080 A1
SW081 A2
ZD080 A2
ZD081 A1
ZD082 A2
ZD083 A2

DVD KeyCtrl Board Layout(Top Side for 19PFL5622)

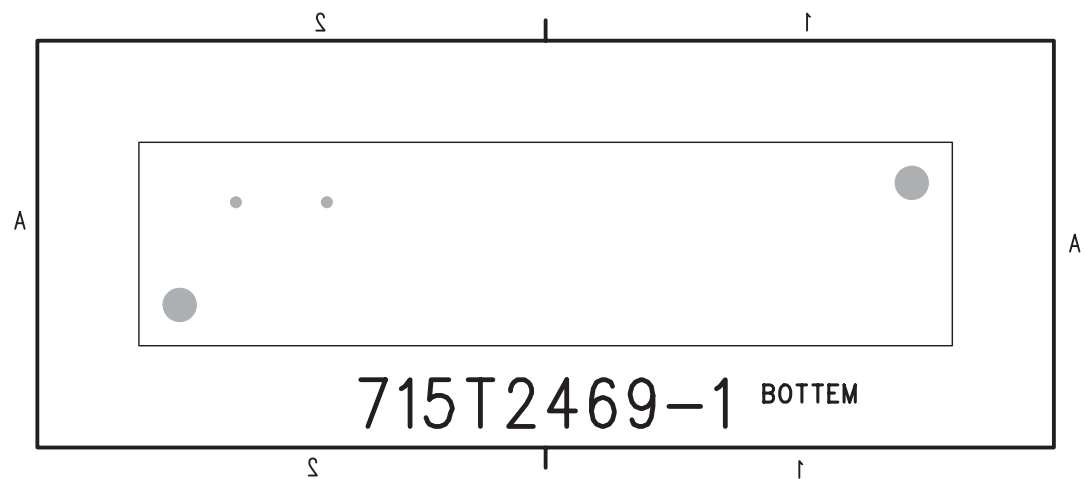


C080 A2 R088 A2
C081 A2 R089 A2
CN080 A2 SW080 A1
LED080 A1 SW081 A2
Q080 A2 SW082 A2
R080 A1 SW083 A1
R081 A2 ZD080 A1
R082 A2 ZD081 A1
R083 A2 ZD082 A1
R084 A2 ZD083 A2
R085 A2 ZD084 A2
R086 A1 ZD085 A2
R087 A1 ZD086 A1

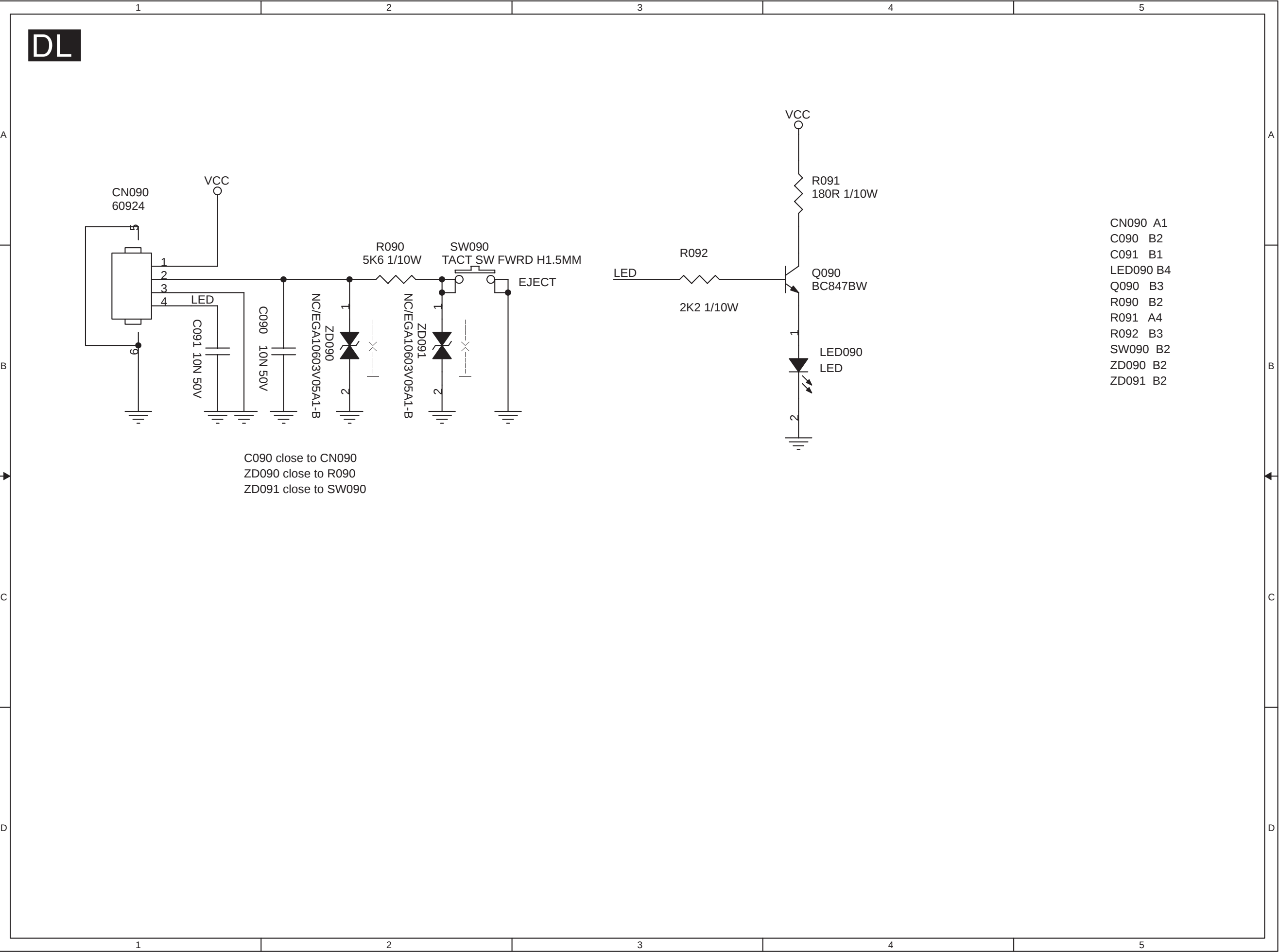
DVD KeyCtrl Board Layout(Bottom Side for 19MD)



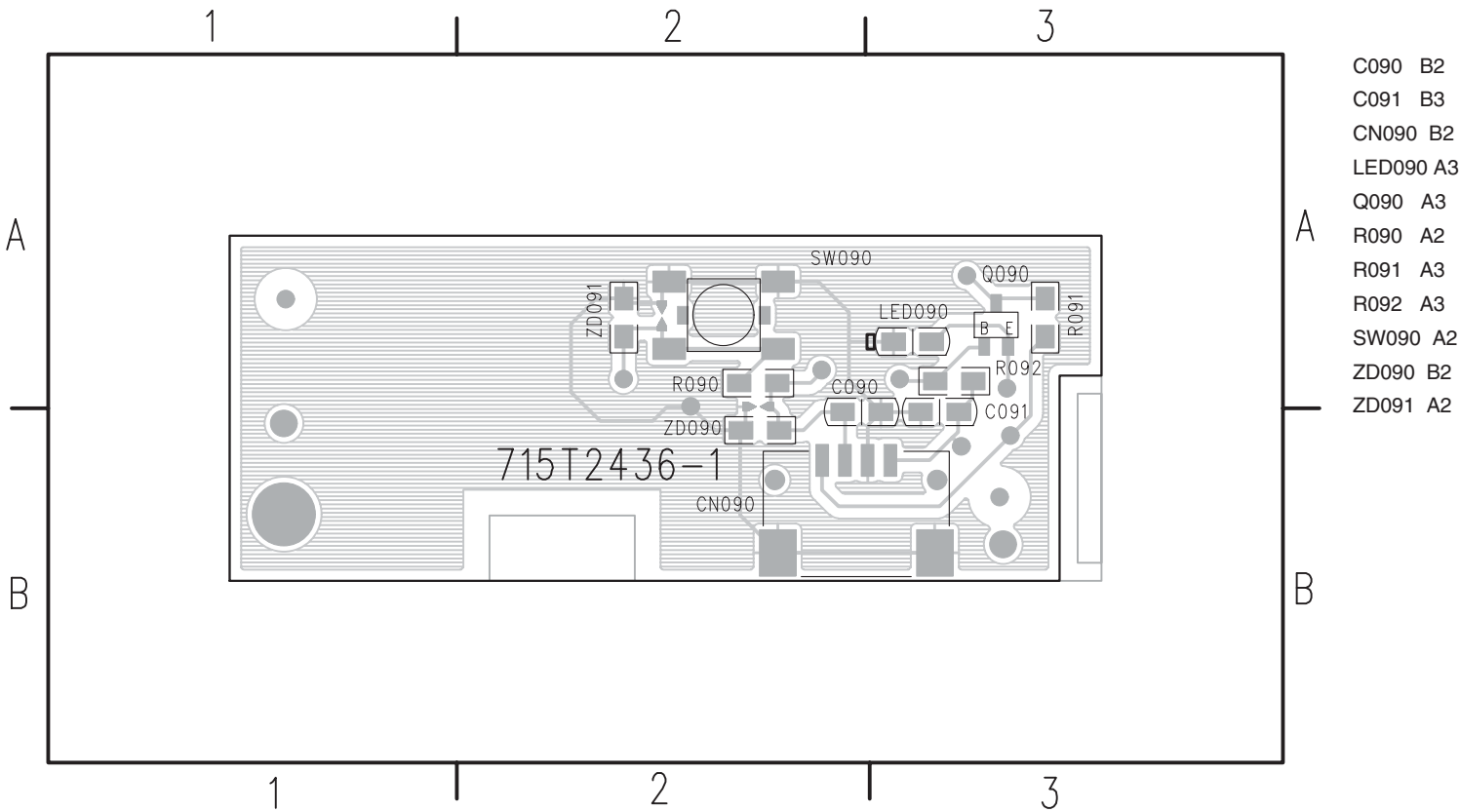
DVD KeyCtrl Board Layout(Bottom Side for 19PFL5622)



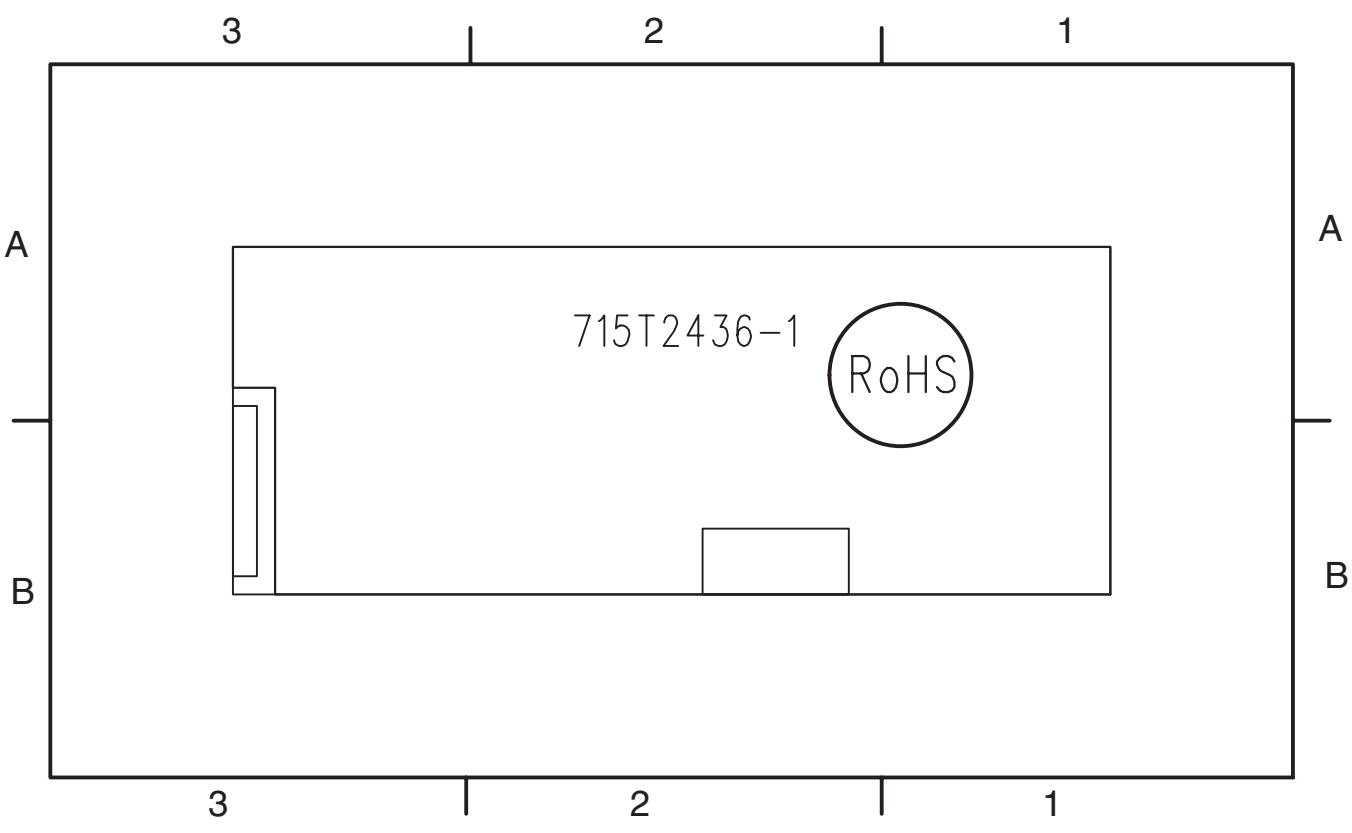
DVD LED Board Schematic Diagram(for 19MD)



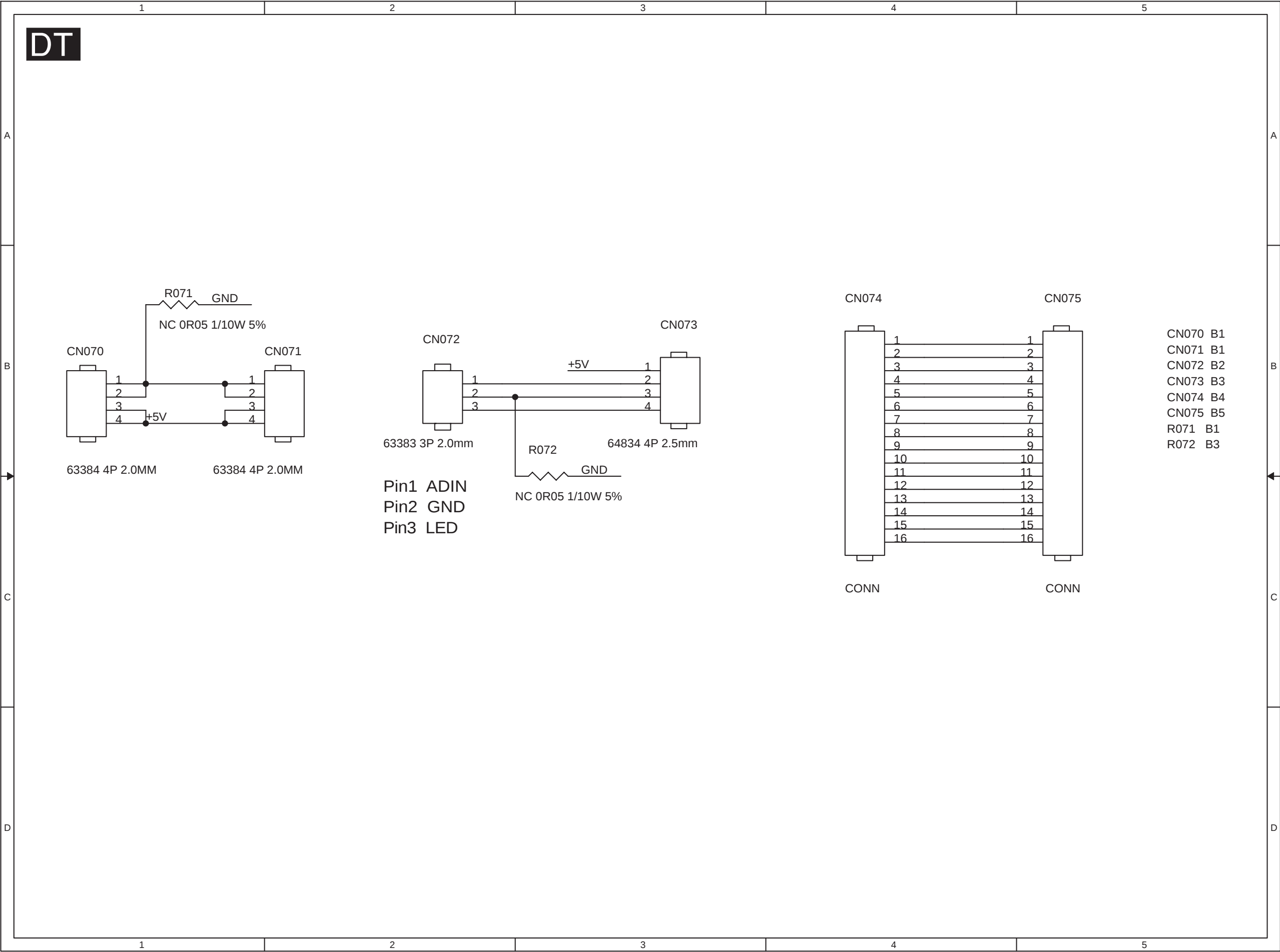
DVD LED Board Layout(Top Side for 19MD)



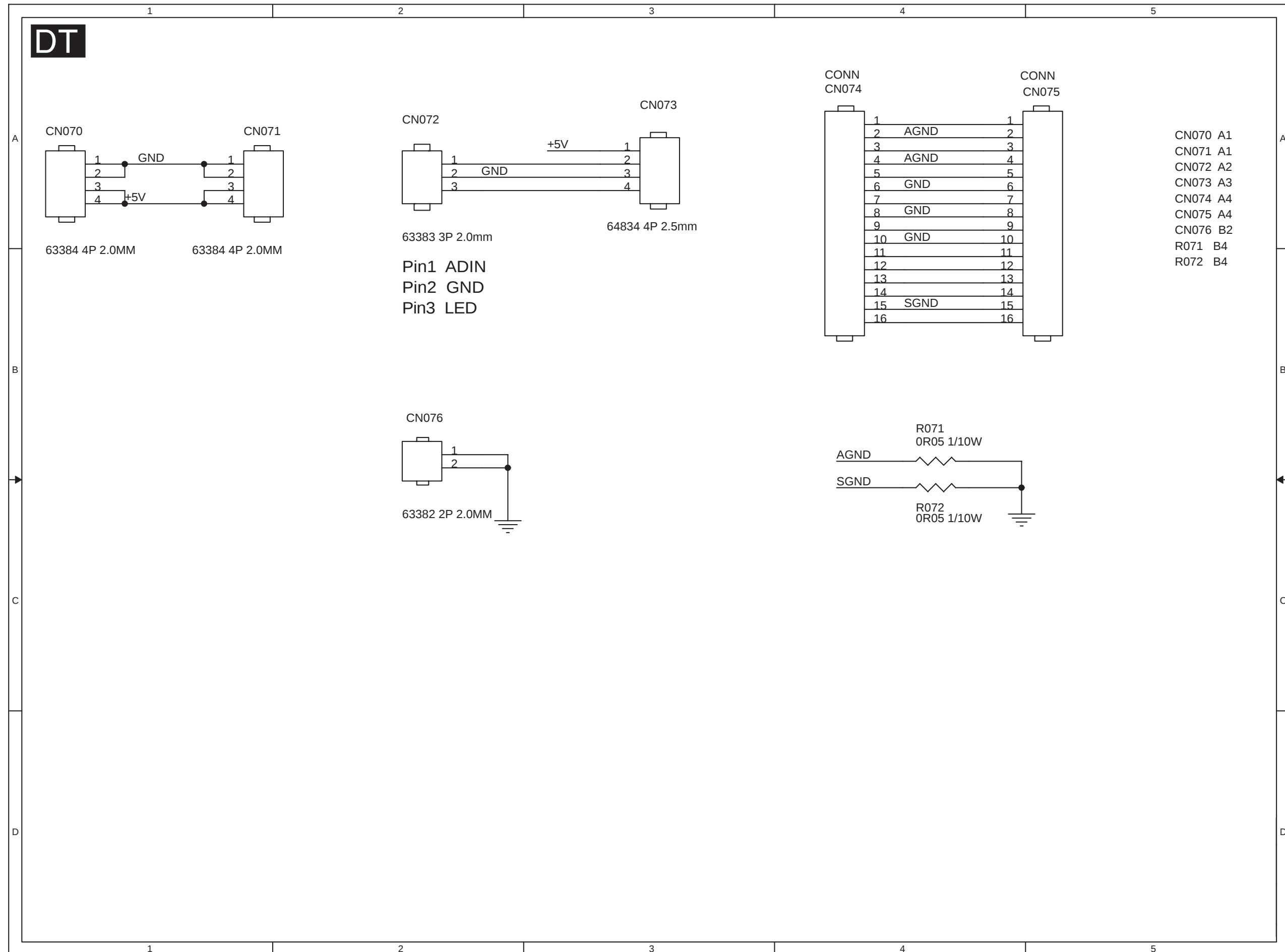
DVD LED Board Layout(Bottom Side for 19MD)



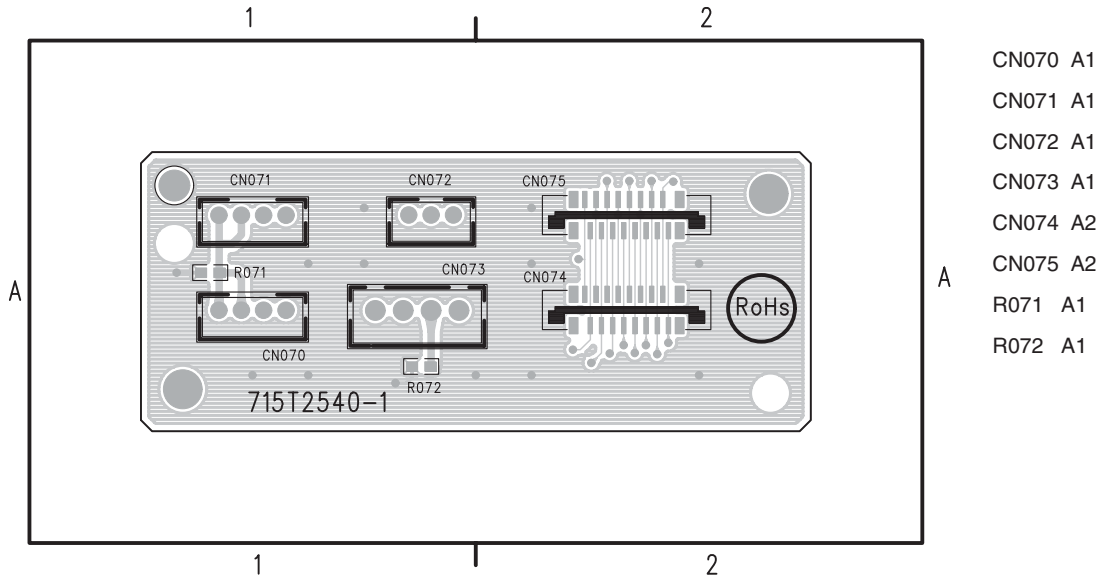
DVD Transfer Board Schematic Diagram(for 19PFL5622)



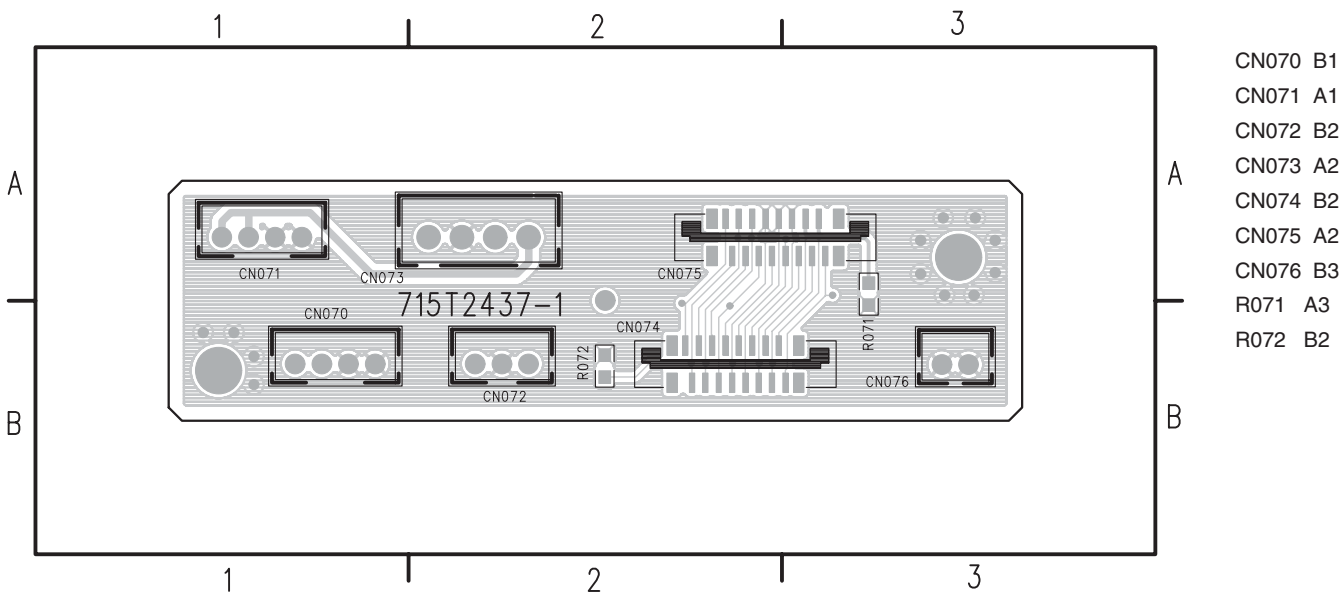
DVD Transfer Board Schematic Diagram(for 19MD)



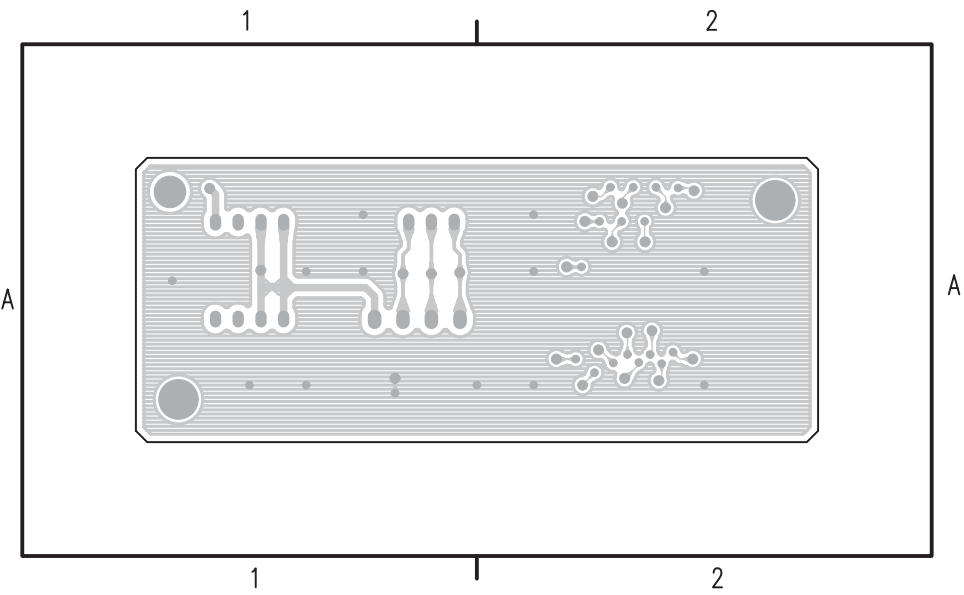
DVD Transfer Board Layout(Top Side for 19PFL)



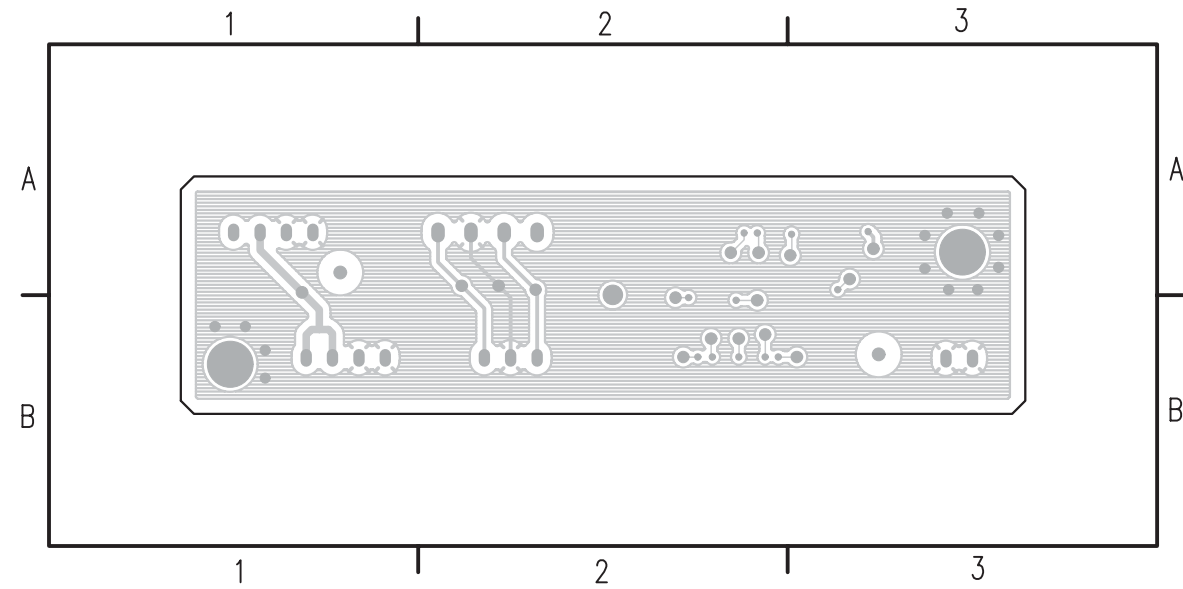
DVD Transfer Board Layout(Top Side for 19MD)



DVD Transfer Board Layout(Bottom Side for 19PFL)



DVD Transfer Board Layout(Bottom Side for 19MD)



8. Alignments

Index of this chapter:

8.1 Electrical Instructions

8.2 ISP Instructions

8.3 Serial Number Definition

8.4 WriteMTK_CSM_No_HDCP and WriteMTKHDCPKey Instructions

Notes: You could adjust the LCD/TV following this chapter when the LCD/TV has the below defect.

1. Change panel. 2. Change or repair main board. 3. LCD/TV color is not right. 4. The settings are disabled.

8.1 Electrical Instructions

8.1.1 TV mode display adjustment

8.1.1.1 White balance adjustment (B)

General set-up :

Equipment Requirements: Color analyzer or other equal equipment.

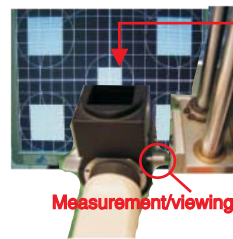
Input requirements:

Input Signal Type : CVBS-NTSC signal.

Frequency = 187.25 MHz (CH. 9).

Input Signal Strength : 10mV (80 dBuV) terminal voltage.

Input Injection Point : TV Tuner input



Clear image

Measurement/viewing selector



Initial Set-up : Set Smart picture as "Personal" (Brightness=50, Color=50, Contrast=50) and check Factory "SP_MODE_PWM " for Personal/Rich=165, Apply "100% Full White/100IRE " pattern by TV pattern generator.

Alignment : Adjust the factory "CLR_TEMP_R / CLR_TEMP_G / CLR_TEMP_B" To met NORMAL, COOL and WARM color temperature requiremet.
[Enter factory key 062596 by remoted number key]

Output Detection Points : Screen center.

1. Check (X, Y) co-ordinates as belows:

	Normal/(8500°K)	Cool/(13000°K)	Warm/(6500°K)
x (center)	0.291 ± 0.005	0.273 ± 0.005	0.314 ± 0.005
y (center)	0.302 ± 0.005	0.280 ± 0.005	0.324 ± 0.005
Y (center)	160 ± 20 nits		

Table 8.1: Reading with Minolta CA-110.(CA-210)

If you have not CA-110, the following R,G and B values are for your reference.

	Normal/(8500°K)	Cool/(13000°K)	Warm/(6500°K)
R	117	144	118
G	112	130	116
B	108	123	144

2. Check the gray pattern should be distinguished and color bar is correct

Check Luminance Note:

Use Minolta CA-110 for colour coordinates and luminance check.

Luminance typical 200 Nits , in the center of the screen when 'Smart picture' at 'PERSONAL', and Brightness and Contrast control set at 100%.

8.1.2 PC Mode Adjustment

8.1.2.1 White balance adjustment (B)

General set-up :

Equipment Requirements: PC signal / Color analyzer.

Input requirements:

Input Signal Type : PC R/G/B analog TTL separate Sync signal.

Timing = 1024x768/60Hz.

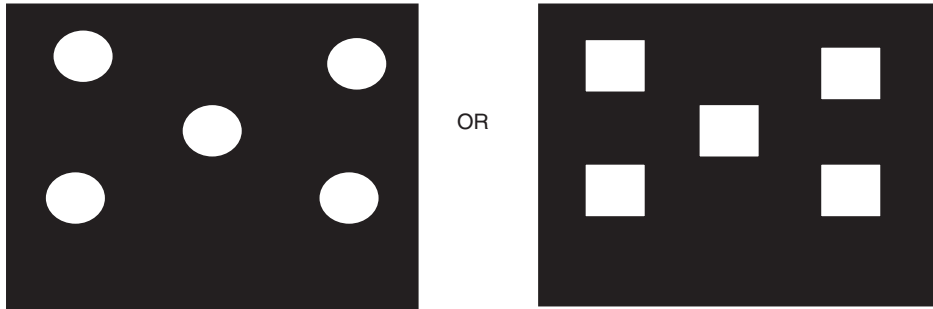
Input Signal Strength : 700mV.

Input Injection Point : D-Sub

Initial setting : Check factory " VGA_PWM_MIN " =60 and
 " VGA_PWM_MAX " = 200, then run Factory
 " AUTO_COLOR" with 5 white block pattern. (see pattern-A)
 Adjustment : Adjust Factory " CLR_TEMP_R / CLR_TEMP_G /
 CLR_TEMP_B " to met specification of Normal/Warm/Cool

Reading in Minolta CA-110.

	Normal/ (8500°K)	Cool/(11500°K)	Warm/(6500°K)
x (center)	0.291 ± 0.005	0.273 ± 0.005	0.314 ± 0.005
y (center)	0.302 ± 0.005	0.280 ± 0.005	0.324 ± 0.005
Y (center)	150 ± 20 nits		



Pattern-A

8.1.3 AV-1 (YpbPr) mode display adjustment

8.1.3.1 White balance adjustment (B)

General set-up:

Equipment : Quantum Data Pattern Generator 801GD or 802G.
 Apply 1080i, SMPTE color pattern.



(Or FLUKE 54200, apply 576i (PAL system) , Color bar with black and white pattern.)



8. Alignments

Alignment method:

Initial Set-up : Set Smart picture as "Personal", Brightness=50, Color=50, Contrast=50)
Then run factory " AUTO-COLOR "process.

Alignments : Color temperature Normal/Warm/Cool DAC dada same as TV mode.
Check chromaticity (X, Y) co-ordinates specification:

	Normal/ (8500°K)	Cool/(11500°K)	Warm/(6500°K)
x (center)	0.291 ± 0.005	0.273 ± 0.005	0.314 ± 0.005
y (center)	0.302 ± 0.005	0.280 ± 0.005	0.324 ± 0.005

If out of specification then fine-tune factory " ADC_GAIN_R / ADC_GAIN_R /
ADC_GAIN_R "

8.1.4 AV-2 (CVBS/S-V) mode display adjustment

8.1.4.1 White balance adjustment (B)

General set-up : Use FLUKE 54200, CVBS and S-V with full white pattern in 100 IRE
output level.

Alignment method:

Initial Set-up : Set Smart picture as "Personal", Brightness=50, Color=50, Contrast=50)

Alignments : Color temperature Normal/Warm/Cool DAC dada same as TV mode.
Check chromaticity (X, Y) co-ordinates specification:

	Normal/ (8500°K)	Cool/(11500°K)	Warm/(6500°K)
x (center)	0.291 ± 0.005	0.273 ± 0.005	0.314 ± 0.005
y (center)	0.302 ± 0.005	0.280 ± 0.005	0.324 ± 0.005

If out of specification then fine-tune factory "CLR_TEMP_R / CLR_TEMP_R /
CLR_TEMP_R "

8.1.5 HDMI mode adjustment and HDCP key

8.1.5.1 White balance adjustment (B)

General set-up : Quantum 802BT or equivalent equipments

Alignment method:

Initial Set-up : Set Smart picture as "Personal", Brightness=50, Color=50, Contrast=50)

Alignments : Color temperature Normal/Warm/Cool DAC dada same as TV mode.
Check chromaticity (X, Y) co-ordinates specification:

	Normal/ (8500°K)	Cool/(11500°K)	Warm/(6500°K)
x (center)	0.291 ± 0.005	0.273 ± 0.005	0.314 ± 0.005
y (center)	0.302 ± 0.005	0.280 ± 0.005	0.324 ± 0.005

If out of specification then fine-tune factory " CLR_TEMP_R / CLR_TEMP_R /
CLR_TEMP_R "

8.1.5.2 HDCP Key Test (B)

8.1.5.2.1 Use pattern generator

Equipment: Quantum 802BT or equivalent equipments.

Pattern : Standard HDCP Pattern (It's color bar)

Timing .

720 X 480P /60Hz

1280X 720P /60Hz

1920X1080i /60Hz

Result: The PASS information should be shown on the screen.

8.2 Service Tools

8.2.1 ComPair

Introduction

ComPair (Computer Aided Repair) is a Service tool for Philips Consumer Electronics products. and offers the following:

1. ComPair helps you to quickly get an understanding on how to repair the chassis in a short and effective way.
2. ComPair allows very detailed diagnostics and is therefore capable of accurately indicating problem areas. You do not have to know anything about I²C or UART commands yourself, because ComPair takes care of this.
3. ComPair speeds up the repair time since it can automatically communicate with the chassis (when the uP is working) and all repair information is directly available.
4. ComPair features TV software upgrade possibilities.

Specifications

ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The (new) ComPair II interface box is connected **to the PC** via an USB cable. For the TV chassis, the ComPair interface box and the TV communicate via a bi-directional cable via the service connector(s).

How to Connect

This is described in the ComPair chassis fault finding database.

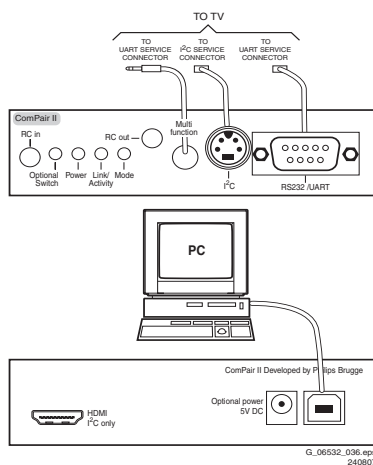


Figure 8-1 ComPair II interface connection

Caution: It is compulsory to connect the TV to the PC as shown in the picture above (with the ComPair interface in between), as the ComPair interface acts as a level shifter. If one connects the TV directly to the PC (via UART), ICs will be blown!

How to Order

ComPair II order codes:

- ComPair II interface: 3122 785 91020.
 - ComPair32 CD (update): 3122 785 60160.
 - ComPair I²C interface cable: 3122 785 90004 (to be used with chassis L01, A02, A10, EMx, TPM1.xA, etc ...).
 - ComPair I²C interface extension cable: 3139 131 03791 (to be used with chassis L01, A02, A10, L04, LC4, LC7.1, LC7.2).
 - ComPair UART interface cable: 3122 785 90630 (to be used with chassis LC4, EJ3, BJ2, BL2, BP2, ...).
 - ComPair RS232 cable: 3104 311 12742 (to be used with chassis Q52x).
 - ComPair I²C interface cable (3.5 mm Jack-to-SVHS plug): 9965 100 07325 (to be used with chassis LC7.5).
- Note:** For I²C it is **compulsory** to use this particular cable.
- ComPair UART interface cable (3.5 mm Jack-to-Jack): 3138 188 75051 (to be used with chassis LC7.5).

Note: For UART it is also allowed to use a standard "Jack-to-Jack" cable.

Note: If you encounter any problems, contact your local support desk.

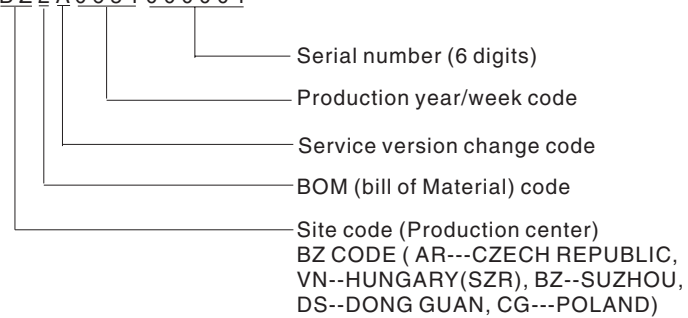
8.2.2 LVDS Tool

Support of the LVDS Tool has been discontinued.

8.3 Serial Number Definition

BOM Code:

PANEL SUPPLIER	CODE
AU	1
CPT	2
LPL(LG)	3
QDI	4
CMO	5
HSD	6
SVA	7

BZ2A0651000001

TV audio demodulator

- Support BTSC/EIA-J/A2/NICAM/PAL FM/SCAM world wild format
- Standard auto detection
- Stereo demodulation , SAP demodulation
- Noise reduction
- Mode selection (Main / SAP / Stereo)
- Pink noise and white noise generator
- Equalizer
- Sub-woofer / Bass enhancement
- Noise auto mute
- 3D surround processing include virtual surround
- Audio and video lip synchronization
- Support Reverberation

Audio DAC

- On chip 4 audio DAC support R/L channel and subwoofer output

DRAM Controller

- Support 64Mb to 1Gb DDR DRAM devices
- Configurable 16/32/64 bit data bus interface
- Support DDR1-333,DDR1-400,DDR2-400,DDR2-533,DDR2-667
- JEDEC specification compliant SDRAM

Audio DSP

- Support Dolby Digital AC-3 decoding (ATSC)
- MPEG-1 layer I/II decoding (DVB)
- MPEG-2 AAC decoding (Japan)
- DV audio decoding
- MP3 decoding
- Dolby Prologic II
- Audio output: 7.1ch+2ch (down mix)
- Pink noise and white noise generator
- Equalizer
- Bass management
- 3D surround processing include virtual surround
- Audio and video lip synchronization
- Support reverberation
- Auto volume control
- One SPDIF out
- 5 bit (10-channel) I2S out I/F up to 24 bit resolution per channel

Peripherals

- Three UARTs with Tx and Rx FIFO, one of them have hardware flow control
- Three serial interfaces, one is master for general purpose, second is master for HDMI key, third is slave for HDMI EDID data
- Three PWMs
- IR blaster and receiver
- IEEE 1394 link controller
- Support IDE bus or Memory card I/F ; IDE support ATA/ATAPI7 UDMA mode 5, 100MB/s; Memory card I/F support MS/MS-Pro, SD, CF, MMC, SM, and xD
- Real-time clock and watchdog controller
- Smart Card Reader
- PCMCIA/POD/CI interface
- Support three NOR flash or one NOR and one NAND flash
- Support CableCARD host control bus
- Support 128 bit e-Fuse

IC Outline

- MT5371/2 588 pin BGA package
- 3.3V / 1.2V and 2.5V for DDR1, 1.8V for DDR2

9.1.2.2 MT5112

The MT5112BD is a highly integrated single-chip for digital terrestrial HDTV and digital cable TV demodulation. The chip is designed specifically for the digital terrestrial HDTV and CATV receivers, And is fully compliant with ATSC A/53 , SCTE DVS-031 , and ITU J.83 Annex B standards.

Compliant with ATSC digital television standard
Supports SCTE DVS-031 and ITU J.83 Annex B digital CATV standard
Accepts direct IF (44MHz or 43.75MHz) and low IF (5.38MHz)
Differential IF input with programmable input signal level : 0.5Vpp to 2Vpp
NTSC interference rejection capability
Compensate echo up to -35 to +60us range for terrestrial HDTV reception
Pass all Brazil fading channel ensembles
Meet all ATSC A74 requirement
On-chip programmable gain amplifier
25MHz crystal for clock generation
Excellent adjacent and co-channel rejection capability, only single SAW is required
Full-digital timing recovery, no VCXO is required
Full-digital frequency offset recovery with wide acquisition range +/- 1MHz for ATSC and +/- 250kHz for CATV reception
Dual digital AGC controls for IF and RF respectively
MPEG-2 transport stream output in parallel or serial format
On-chip error rate estimators for TS packets, TCM decoder, and equalizer
EIA/CEA-909 antenna interface, both mode A and mode B are supported
Controlled by I2C interface
Supports sleep mode to save power consumption
Core power supply: 1.8V, peripheral power supply : 3.3V
100-TQFP with lead free package

9.2 Abbreviations List

CSM	Customer Service Mode
ATSC	Advanced Television Systems Committee, the digital TV standard in the USA
DVD	Digital Versatile Disc
EEPROM	Electrically Erasable and Programmable Read Only Memory
3DNR	Temporal (3D) Noise Reduction
AGC	Automatic Gain Control: algorithm that controls the video input of the feature box
FM	Field Memory or Frequency Modulation
AM	Amplitude Modulation
AP	Asia Pacific
ASF	Auto Screen Fit: algorithm that adapts aspect ratio to remove horizontal black bars without discarding video information
ATV	See Auto TV
Auto TV	A hardware and software control system that measures picture content, and adapts image parameters in a dynamic way
AV	External Audio Video
AVIP	Audio Video Input Processor
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz
ComPair	Computer aided rePair
CP	Connected Planet / Copy Protection
CSS	Content Scrambling System; An encryption method for MPEG-2 video on DVDs. The algorithm and keys required to decode the disc are stored on the DVD-player
CVBS	Composite Video Blanking and Synchronization
DFU	Directions For Use: owner's manual
DNR	Digital Noise Reduction: noise reduction feature of the set
DSP	Digital Signal Processing
DST	Dealer Service Tool: special remote control designed for service technicians
DTCP	Digital Transmission Content Protection; A protocol for protecting digital audio/video content that is traversing a high speed serial bus, such as IEEE-1394
DVI(-d)	Digital Visual Interface (d= digital only)
EAS	Emergency Alert Signalling; A cable TV standard (SCTE18) to signal emergency information to digital terminal devices
E-DDC	Enhanced Display Data Channel (VESA standard for communication channel and display). Using E-DDC, the video source can read the EDID information from the display.
EDID	Extended Display Identification Data (VESA standard)
EMI	Electro Magnetic Interference
EMM	Entitlement Management Message
EPLD	Erasable Programmable Logic Device
EU	Europe
FBL	Fast BLanking: DC signal accompanying RGB signals
FDS	Full Dual Screen (same as FDW)
FDW	Full Dual Window (same as FDS)
FLASH	FLASH memory
FTV	Flat TeleVision
H	H_sync to the module
HD	High Definition
HDD	Hard Disk Drive

NTSC	National Television Standard Committee. Color system mainly used in North America and Japan. Color carrier NTSC M/N= 3.579545 MHz, NTSC 4.43= 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)
NVM	Non-Volatile Memory: IC containing TV related data such as alignments
OSD	On Screen Display
PLL	Phase Locked Loop. Used for e.g.
LVDS	Low Voltage Differential Signalling
PAL	Phase Alternating Line. Color system mainly used in West Europe (color carrier= 4.433619 MHz) and South America (color carrier PAL M= 3.575612 MHz and PAL N= 3.582056MHz)
PCB	Printed Circuit Board (same as PWB)
PCM	Pulse Code Modulation
PWB	Printed Wiring Board (same as "PCB")
PWM	Pulse Width Modulation
QAM	Quadrature Amplitude Modulation; modulation method
RAM	Random Access Memory
RGB	Red, Green, and Blue. The primary color signals for TV. By mixing levels of R, G, and B, all colors (Y/C) are reproduced.
RC	Remote Control RC5 / RC6 Signal protocol from the remote control receiver
RESET	RESET signal
ROM	Read Only Memory
SAM	Service Alignment Mode
SCART	Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televisieurs
SCL	Serial Clock I2C
SCL-F	CLock Signal on Fast I2C bus
SD	Standard Definition
SDA	Serial Data I2C
SDA-F	DAta Signal on Fast I2C bus
SDI	Serial Digital Interface, see "ITU-656"
SDRAM	Synchronous DRAM
SECAM	SEquence Couleur Avec Memoire. Color system mainly used in France and East Europe. Color carriers= 4.406250 MHz and 4.250000 MHz
SIF	Sound Intermediate Frequency
SMPS	Switched Mode Power Supply
SOG	Sync On Green
SOPS	Self Oscillating Power Supply
I2C	Integrated IC bus
I2D	Integrated IC Data bus
I2S	Integrated IC Sound bus
IB	In Band channel
IF	Intermediate Frequency
Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in "pairs", causing line flicker.
IR	Infra Red
IRQ	Interrupt Request
LATAM	Latin America
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LPL	LG.Philips LCD (supplier)
MUTE	MUTE Line

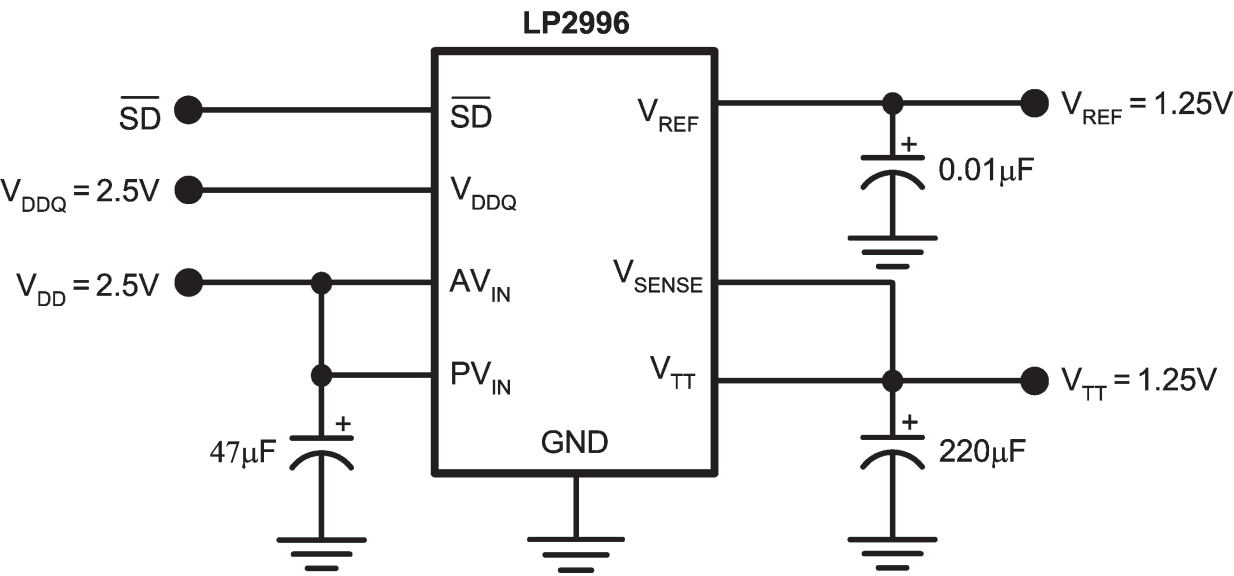
TFT	Thin Film Transistor
SRAM	Static RAM
STBY	STandBY
SOG	Sync On Green
SVGA	800x600 (4:3)
SVHS	Super Video Home System
SW	Software
SWAN	Spatial temporal Weighted Averaging Noise reduction
SXGA	1280x1024
TMD5	Transmission Minimized Differential Signalling
UXGA	1600x1200 (4:3)
V	V-sync to the module
VCR	Video Cassette Recorder
VESA	Video Electronics Standards Association
VGA	640x480 (4:3)
VL	Variable Level out: processed audio output toward external amplifier
VSB	Vestigial Side Band; modulation method
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
WXGA	1280x768 (15:9)
XGA	1024x768 (4:3)
Y	Luminance signal
YPbPr	Component video. Luminance and scaled color difference signals (B-Y and R-Y)

9.3 IC Data Sheets

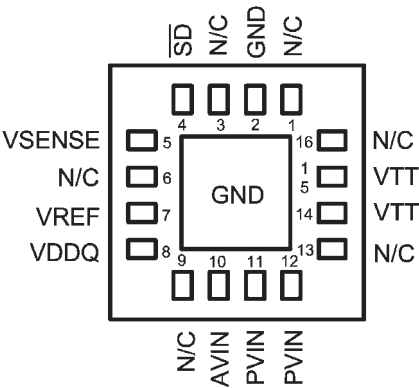
This section shows the internal block diagrams and pin configurations of ICs that are drawn as "black boxes" in the electrical diagrams (with the exception of "memory" and "logic" ICs).

9.3.1 IC Data Sheets-LP2996(U503)

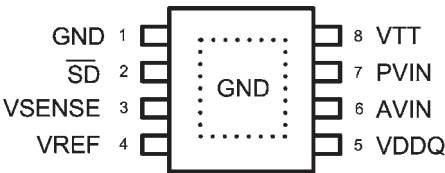
Typical Application Circuit



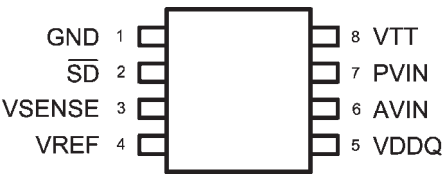
Pin Configuration



LLP-16 Layout



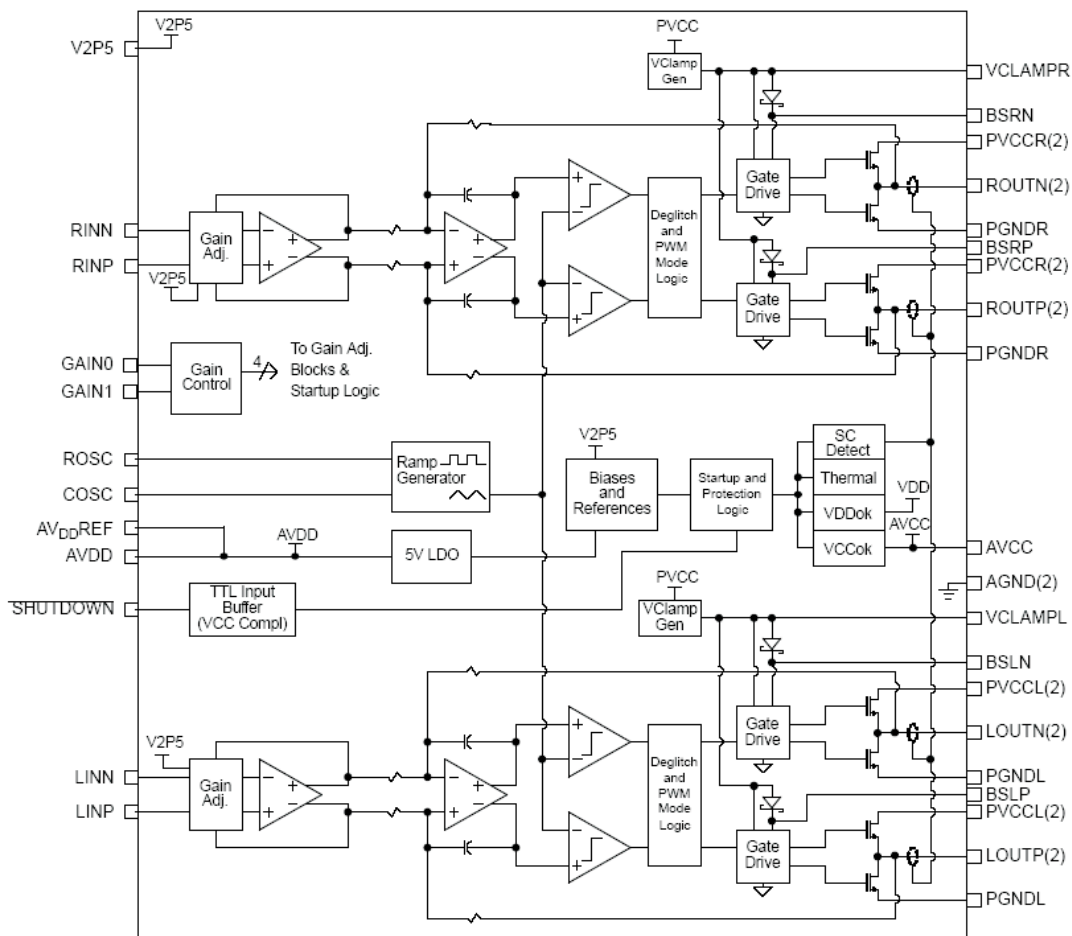
PSOP-8 Layout



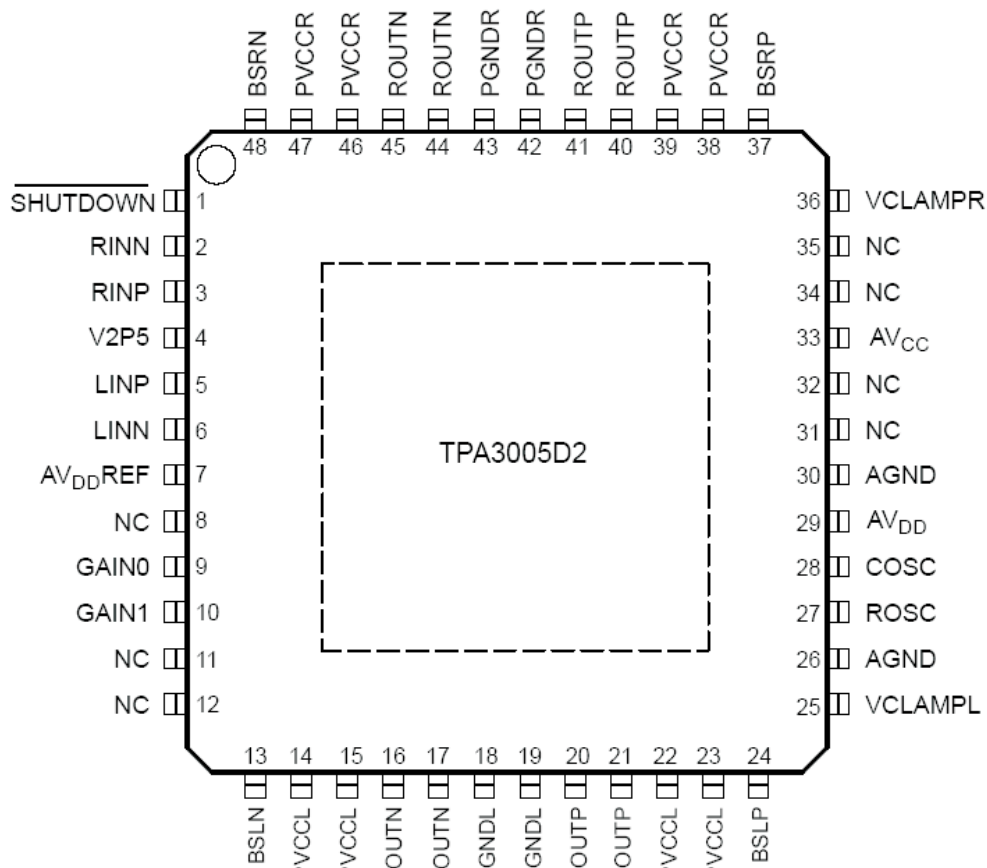
SO-8 Layout

9.3.2 IC Data Sheets-TPA3005D2(U801)

FUNCTIONAL BLOCK DIAGRAM

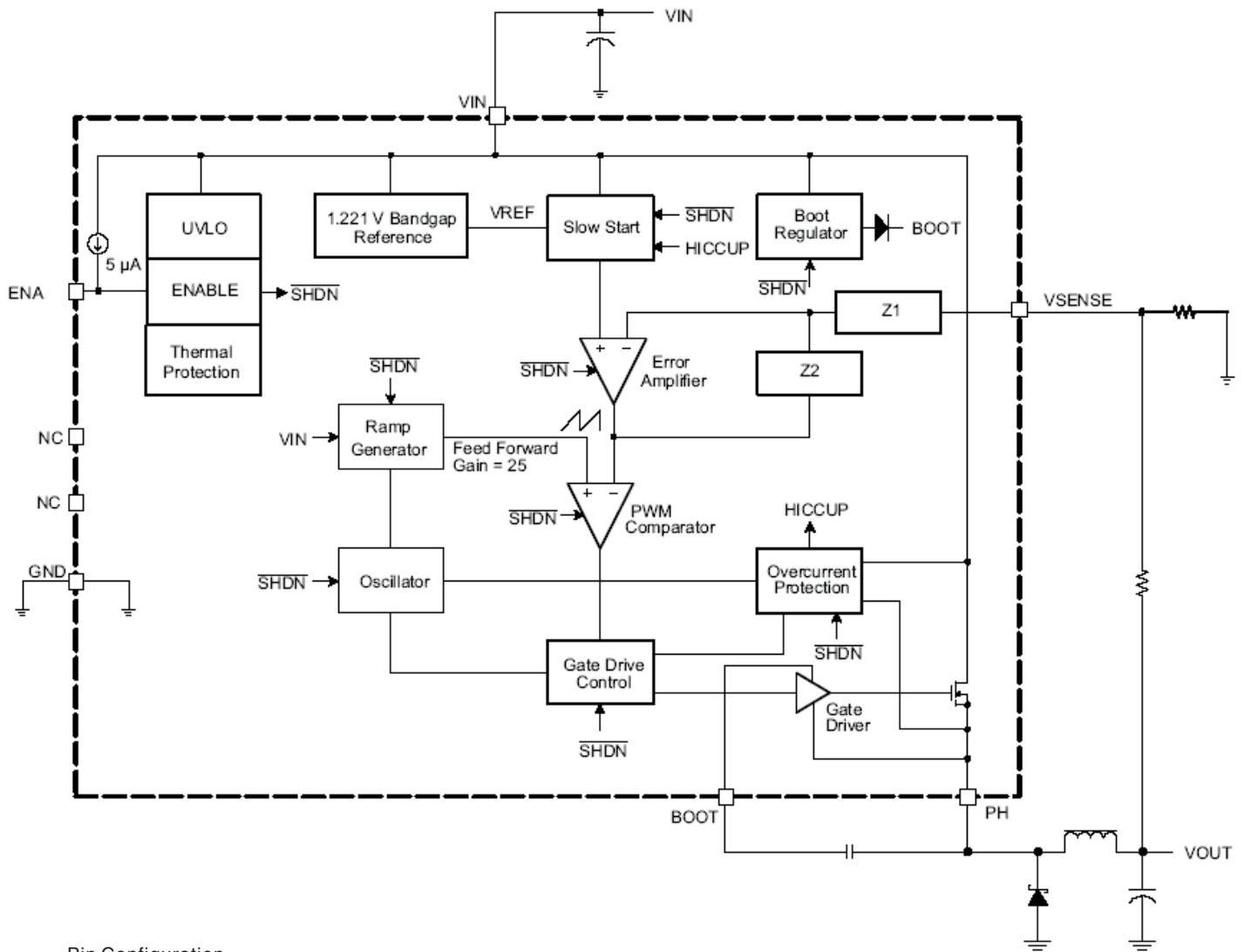


Pin Configuration

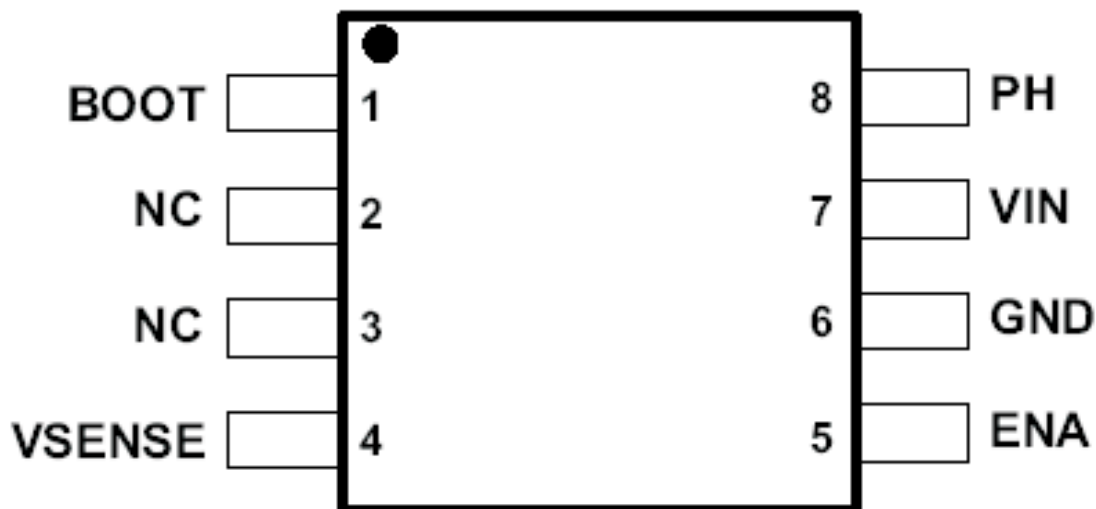


9.3.3 IC Data Sheets-TPS5420(U102)

Function Diagram

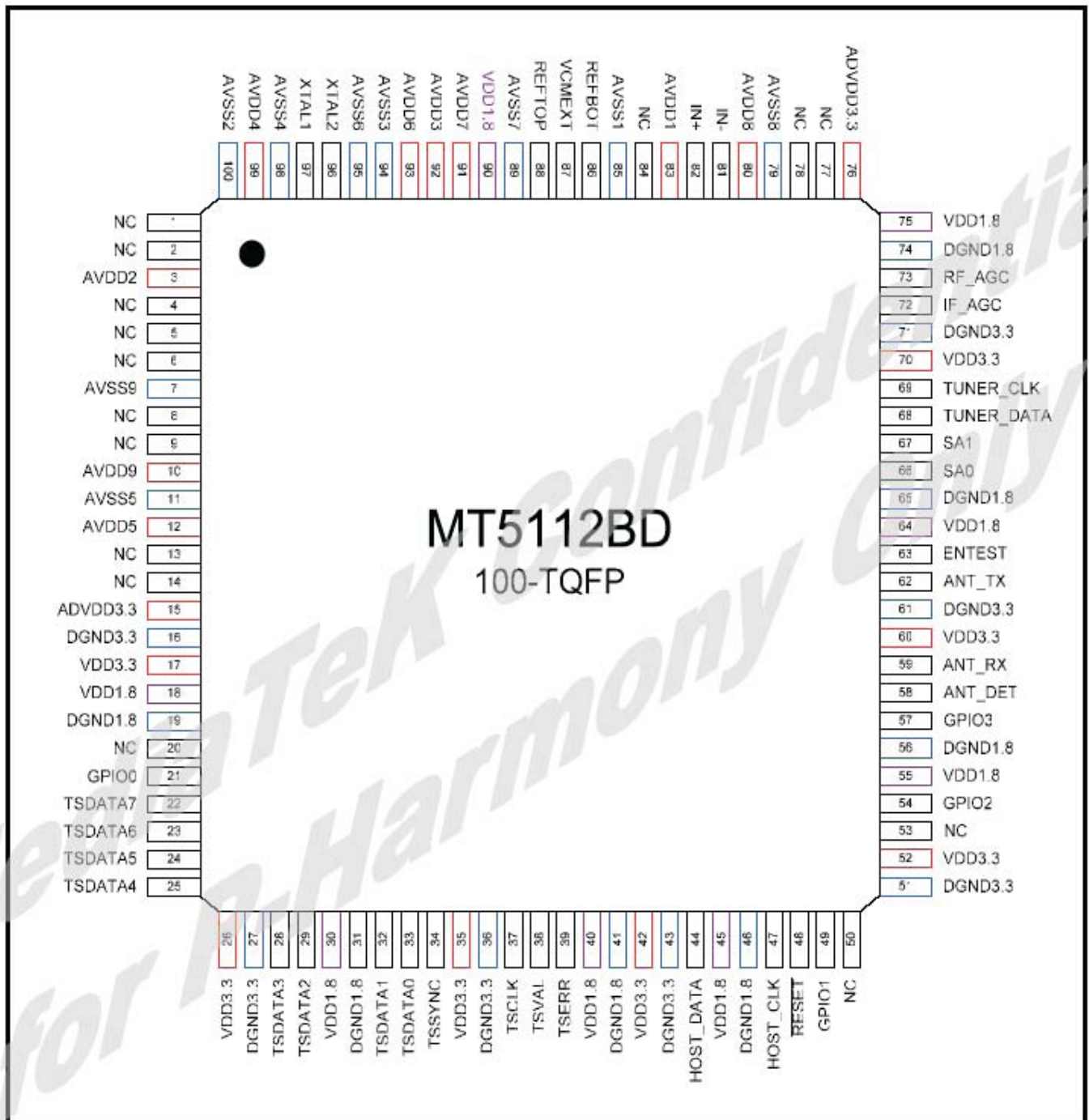


Pin Configuration



9.3.4 IC Data Sheets-MT5112BD(U250)

Pin Configuration



9.3.5 IC Data Sheets-MT5371AJ(U301)

PIN ASSIGNMENT (MT5372, MT5371)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	RA13	RA1	RA5	RA9	RA12	RDQ29	RDQS3_	RDQ25	RDQ21	RDQS2_	RCLK1	RDQ20	GPIO_3	GPIO7	GPIO_11
B	RA8	RA11	RA10	RA3	RA7	RDQ26	RDQS3	RDQ27	RDQ18	RDQS2	RCLK1_	GPIO_0	GPIO_4	GPIO_8	GPIO_12
C	RA4	RA6	RBA1	RRAS_	RCAS_	RDQ24	RDQM3	RDQ28	RDQ16	RDQM2	RDQ17	GPIO_1	GPIO_5	GPIO_9	JTRST_
D	RA0	RA2	RWE_	RBA0	RCS_	RDQ31	RDQ30	RVREF	RDQ23	RDQ22	RDQ19	GPIO_2	GPIO_6	GPIO_10	JTDI
E	RCKE	RODT	RDQ4	RDQ3	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO
F	RDQ1	RDQ6	RDQM0	RVREF	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO
G	RDQS0	RDQS0_	RDQ7	RDQ0	VCC2IO	VCC2IO									
H	RDQ2	RDQ5	RDQ12	RDQ11	VCC2IO	VCC2IO									
J	RDQ9	RDQ14	RDQS1_	RDQS1	VCC2IO	VCC2IO									
K	RDQM1	RDQ15	RDQ8	RDQ10	VCC2IO	VCC2IO									
L	RCLK0	RCLK0_	RDQ13	REXTUP	VCC2IO	VCC2IO									
M	REXTDN	PDCD1_	PDCE1_	PDCE2_	VCC2IO	VCC2IO									
N	PDVS1	PDOE_	PDIORD_	PDIOWR	VCC3IO	VCC3IO									
P	PDWE_	PDIREQ_	PDCTRLVP	PDVS2	VCC3IO	VCC3IO									
R	PDRESET	PDWAIT_	PDINPACK	PDREG	VCC3IO	VCC3IO									
T	PDIOS16	PDCD2_	PDENPOD	POCE2_	VCC2IO	VCC2IO									
U	POCE1_	POOE_	POCE0_	PDA1	VCC2IO	VCC2IO									
V	PDD0	PDD1	PDD2	PDD3	VCC2IO	VCC2IO									
W	PDD4	PDD5	PDD6	PDD7											
Y	PDA0	PDA17	PDA16	PDA15											
AA	PDA14	PDA13	PDA12	PDA11											
AB	PDA10	PDA9	PDA20	PDA21											
AC	POWE_	PDA22	PDA19	PDA18											
AD	PDA8	PDA7	PDA6	PDA5											
AE	PDA4	PDA3	PDA2	IDD8											
AF	IIRDY	IDD9	IDD10	IDD11		VCC3IO	VCC3IO	VCC3IO	VCC3IO						VCC2IO
AG	IDD12	IDD13	IDD14	IDD15	MDATA0	SDIOD2	OPWM1	OSDA1	OWRP2	PGND	AVSS_HC	AVSS_H0	AVSS_H1	AVSS_H2	OPCTRL4
AH	IDIOR_	IDIOW_	IDA2	SDIOCMD	DCLK	SDIOD3	OPWM0	OSDA0	OSCL2	PVCC	AVCC_HC	AVCC_H0	AVCC_H1	AVCC_H2	OPCTRL5
AJ	IDA1	IINTRQ	IDA0	SDIOD0	MCLK	OIRO	PWR5V	OSCL0	OSDA2	CVCC12	RXC_B	RX0B	RX1B	RX2B	OPCTRL6
AK	IRESET_	ICS0_	ICS1_	SDIOCLK	SMCE_	MDATA1	SDIOD1	OPWM2	OSCL1	EXT_RES	RXC	RX0	RX1	RX2	OPCTRL7
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

	11	12	13	14	15
L					
M					
N					
P					
R					
T					
U					
V					
W					
Y					
	11	12	13	14	15

 DDR SIGNAL (120)

 VCC2IO CORE POWER 1.2V

 Analog Power

 NOR Flash / POD (54)

 VCC2IO DDR POWER 2.5V / 1.8V

 Analog Ground

 ATA/CF/MS/SD/XD/SDIO (29)

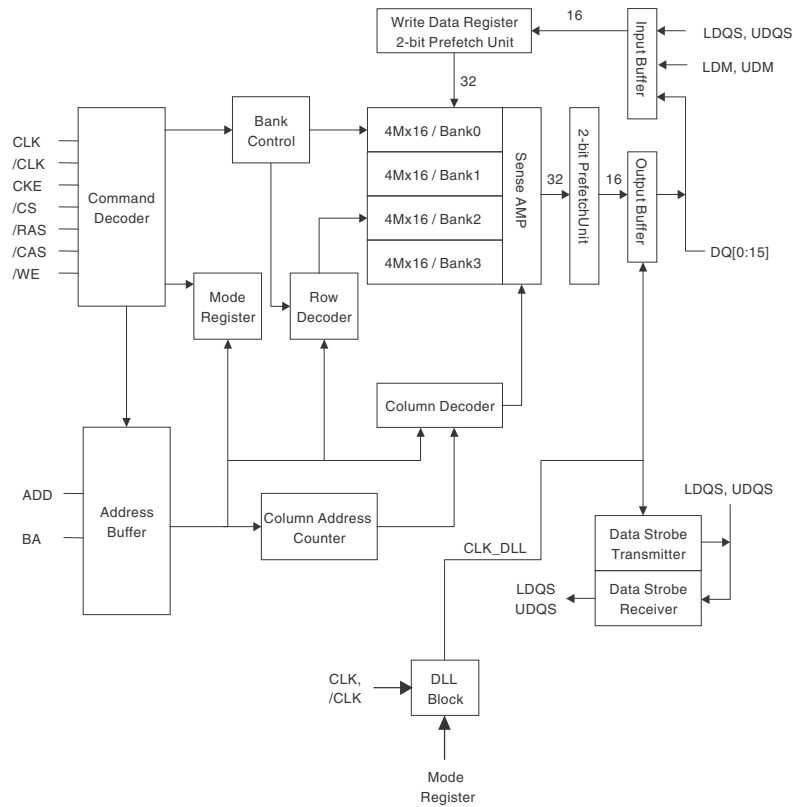
 VCC3IO IO POWER 3.3V

 GPIO

 Digital GND

9.3.6 IC Data Sheets-HY5DU561622ETP-5(U501)

Function Diagram

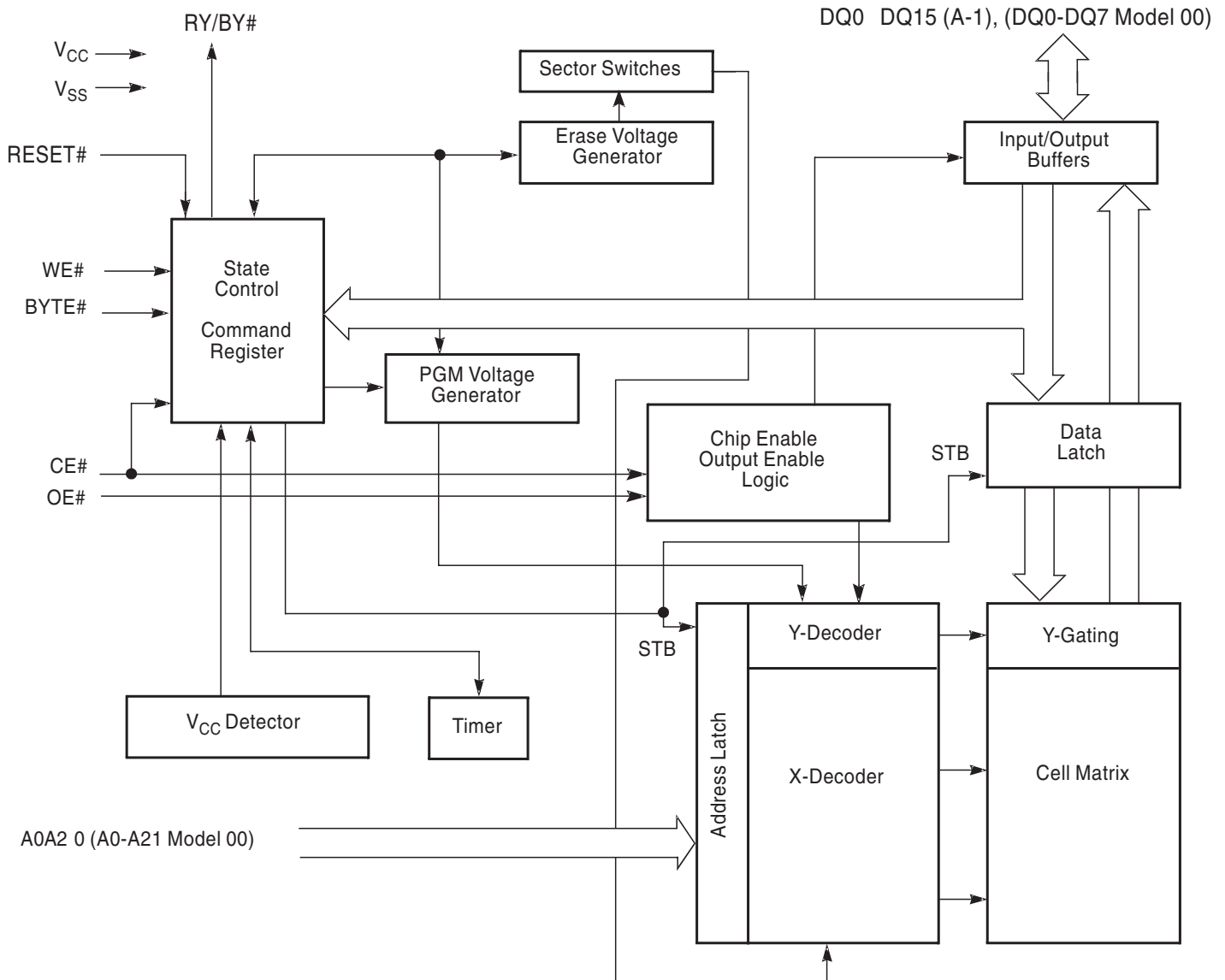


Pin Configuration

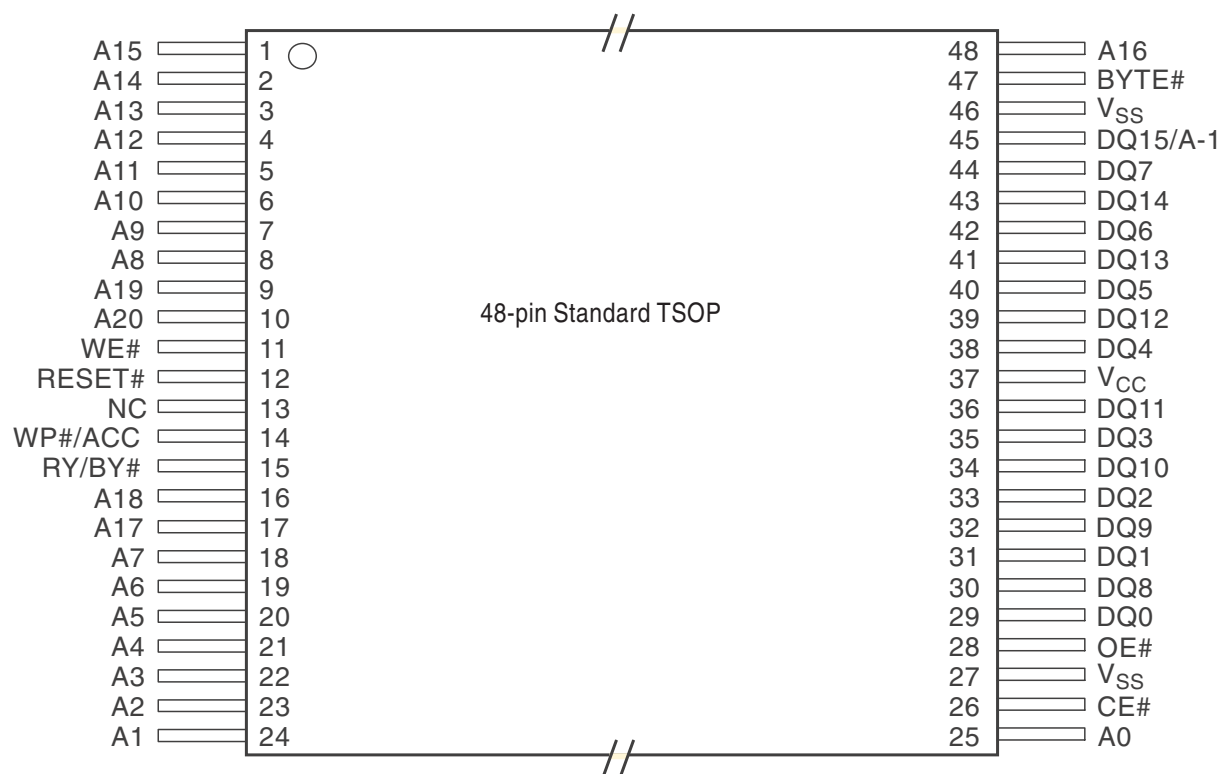
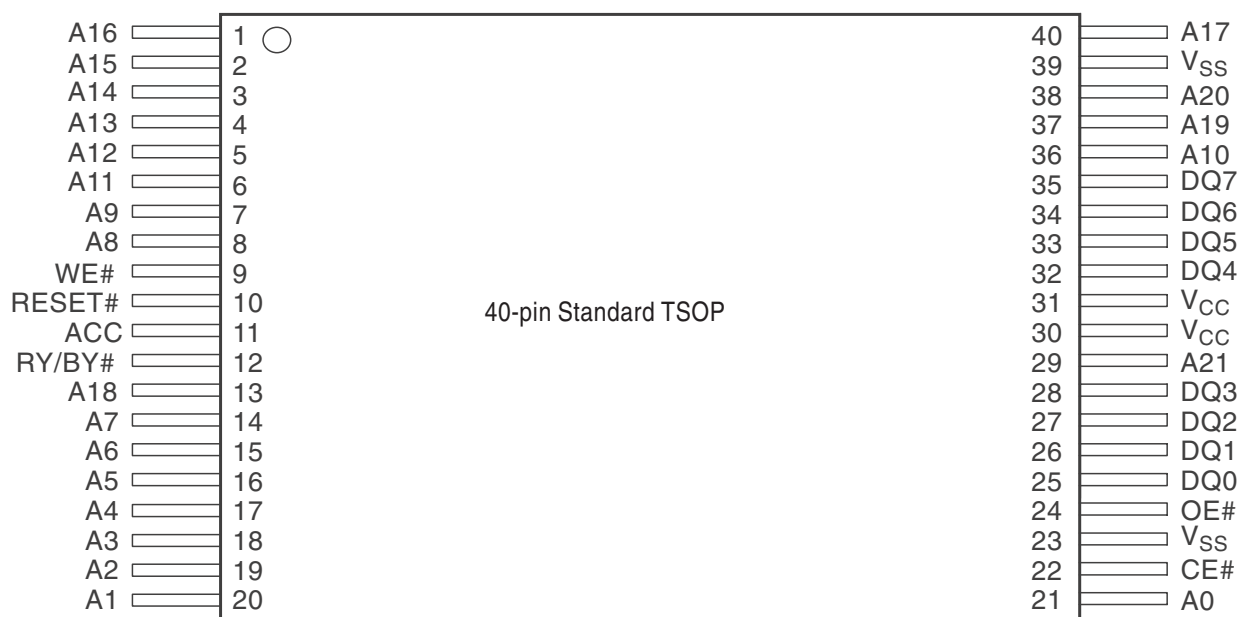
x8		x16		x16		x8	
VDD	VDD	1	66	VSS	VSS		
DQ0	DQ0	2	65	DQ15	DQ7		
VDDQ	VDDQ	3	64	VSSQ	VSSQ		
NC	DQ1	4	63	DQ14	NC		
DQ1	DQ2	5	62	DQ13	DQ6		
VSSQ	VSSQ	6	61	VDDQ	VDDQ		
NC	DQ3	7	60	DQ12	NC		
DQ2	DQ4	8	59	DQ11	DQ5		
VDDQ	VDDQ	9	58	VSSQ	VSSQ		
NC	DQ5	10	57	DQ10	NC		
DQ3	DQ6	11	56	DQ9	DQ4		
VSSQ	VSSQ	12	55	VDDQ	VDDQ		
NC	DQ7	13	54	DQ8	NC		
NC	NC	14	53	NC	NC		
VDDQ	VDDQ	15	52	VSSQ	VSSQ		
NC	LDQS	16	51	UDQS	DQS		
NC	NC	17	50	NC	NC		
VDD	VDD	18	49	VREF	VREF		
NC	NC	19	48	VSS	VSS		
NC	LDM	20	47	UDM	DM		
/WE	/WE	21	46	/CK	/CK		
/CAS	/CAS	22	45	CK	CK		
/RAS	/RAS	23	44	CKE	CKE		
/CS	/CS	24	43	NC	NC		
NC	NC	25	42	A12	A12		
BA0	BA0	26	41	A11	A11		
BA1	BA1	27	40	A9	A9		
A10/AP	A10/AP	28	39	A8	A8		
A0	A0	29	38	A7	A7		
A1	A1	30	37	A6	A6		
A2	A2	31	36	A5	A5		
A3	A3	32	35	A4	A4		
VDD	VDD	33	34	VSS	VSS		

9.3.7 IC Data Sheets-S29AL032D(U350)

Function Diagram



Pin Configuration



10.Recommended/Spare Parts List

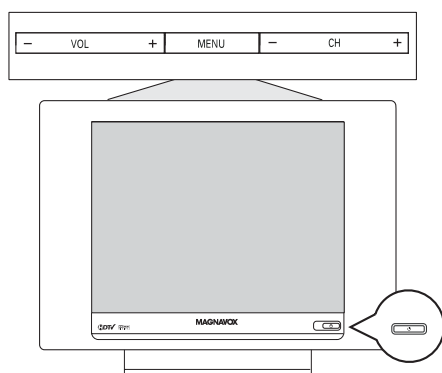
Index of this chapter

10.1 Styling Sheet

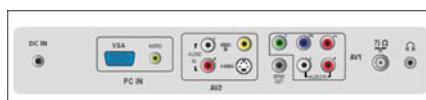
10.2 Recommended Parts List

10.3 Spare Parts List

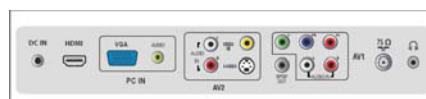
10.1 Styling Sheet



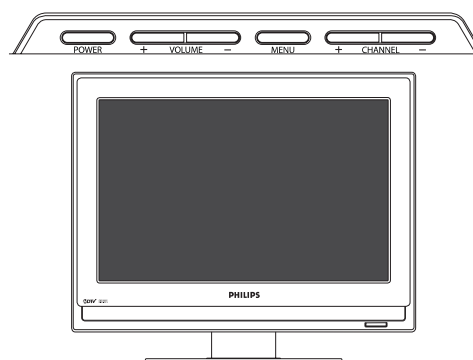
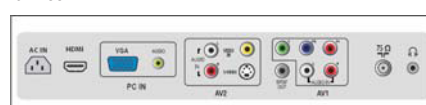
15MF237S



15MF227B



19MF337B



10. Spare Parts List

Sets Listed per Model Number (CTN)

15MF227B/27 (SBOM 1 & 2)			
1050	9965 000 44803	CLAA150XP07FQ	
1050	9965 100 05123	T150XG01 V.2	
1053	9965 000 44812	Scaler Board assy [S]	
1053	9965 100 05124	Scaler Board assy [S]	
1054	9965 000 44805	Keyb. & Control assy [K]	
1055	9965 000 44814	IR & LED assy [I]	
1180	9965 100 09945	Main frame/wire assy	
1184	9965 000 43653	Adapter assy (50W)	
1184	9965 000 43776	Adapter assy 16V 45W	
8850	9965 000 44799	Cable 20p 140mm	
8850	9965 100 05115	Cable 20p 115mm	
8851	9965 000 44947	Cable 9p-9p 60mm	
8903	9965 000 44813	DC-AC Inverter	
A9001	9965 100 05118	Cable 4p-3p 190mm	

A9002	9965 000 44797	Loudspeaker 8Ω 3W
A9003	9965 000 44798	Loudspeaker 8Ω 3W

15MF237S/27 (SBOM 1 & 2)			
8352	9965 000 44970	Cable 6p-6p 250mm	
8801	9965 000 44971	Cable 2p-2p 420mm	
8802	9965 000 44972	Cable 2p-2p 520mm	
SZ002	9965 000 43776	Adapter assy 16V 45W	
SZ003	9965 000 44799	Cable 20p 140mm	
SZ004	9965 100 05118	Cable 4p-3p 190mm	
SZ005	9965 000 44947	Cable 9p-9p 60mm	
SZ014	9965 000 44952	Main frame/wire assy	
SZ017	9965 000 44961	Scaler board assy [S]	
SZ017	9965 100 09610	Scaler board assy [S]	
SZ018	9965 000 44962	DC-AC inverter	
SZ018	9965 100 09614	DC-AC inverter	
SZ019	9965 000 43802	IR & LED assy [I]	
SZ020	9965 000 44963	Keyb. & Control assy [K]	
SZ021	9965 000 43653	Adapter assy (50W)	

1186	9965 000 44946	Loudspeaker 8Ω 3W
1186	9965 100 09604	Loudspeaker 8Ω 3W

19MD357B/37 (SBOM 1 & 2)			
1050	9965 000 39713	LCD 19" A1-L02 CMO	
1050	9965 100 05238	LC190WX1-TLA1	
1053	9965 000 45287	Scaler Board assy [S]	
1053	9965 100 05843	Scaler Board assy [S]	
1054	9965 000 44814	IR & LED assy [I]	
1055	9965 000 44805	Keyb. & Control assy [K]	
1056	9965 000 45288	Power supply assy [P]	
1057	9965 000 45289	DVD Transfer assy [DT]	
1058	9965 000 45291	DVD function assy [DF]	
1059	9965 000 45290	DVD LED assy [DL]	
1060	9965 000 45280	Main frame/wire assy	
1060	9965 200 31787	Main frame/wire assy	
8352	9965 000 45051	Cable 6p-6p 420mm	
8801	9965 000 45054	Cable 2p 345mm	
8802	9965 000 45055	Cable 2p 610mm	
8803	9965 000 45307	Cable 16p 470mm	
8804	9965 000 45304	Cable 2p 150mm	
8805	9965 000 45305	Cable 3p-3p 500mm	
8806	9965 000 45306	Cable 4p-2p 380mm	
8851	9965 000 45053	Cable 11p-11p 190mm	
8852	9965 000 45052	Cable 4p-3p 190mm	
8807	9965 000 45282	Cable FFC 16p 280mm	
8808	9965 000 45283	Cable 4p/4p 330mm	
8809	9965 000 45284	Cable 4p-4 2p 160mm	
8810	9965 100 02766	Cable 110mm	
8811	9965 100 05863	DVD 9KDR0620AP1S	
8812	9965 000 45043	Cable LVDS 30p/90/30p	
8812	9965 100 03635	Cable 30p LVDS	

1186	9965 000 45042	Loudspeaker 8Ω 3W
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19MF337B/27 (SBOM 1 & 2)			
1050	9965 000 39713	LCD 19" A1-L02 CMO	

1050	9965 100 05238	LC190WX1-TLA1
1053	9965 000 45044	Scaler Board assy [S]
1053	9965 100 05243	Scaler Board assy [S]
1054	9965 000 44814	IR & LED assy [I]
1055	9965 000 44805	Keyb. & Control assy [K]
1056	9965 100 02798	Power Board assy [P]
1057	9965 000 45041	Main frame/wire assy
1057	9965 100 05236	Main frame/wire assy
8352	9965 000 45051	Cable 6p-6p 420mm
8801	9965 000 45054	Cable 2p 345mm
8802	9965 000 45055	Cable 2p 610mm
8805	9965 000 45043	Cable LVDS 30p/90/30p
8805	9965 100 03635	Cable 30p LVDS
8851	9965 000 45053	Cable 11p-11p 190mm
8852	9965 000 45052	Cable 4p-3p 190mm

1186	9965 000 45042	Loudspeaker 8Ω 3W
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19PFL5402D/27			
1050	9965 000 39713	LCD 19" A1-L02 CMO	
1053	9965 100 02769	Scaler Board assy [S]	
1054	9965 100 02791	IR & LED assy [I]	
1055	9965 100 02792	Keyb. & Control assy [K]	
1056	9965 100 02798	Power Board assy [P]	
1057	9965 100 02797	Side AV assy [SA]	
1058	9965 100 02763	Main frame/wire assy	
8804	9965 100 02766	Cable 110mm	
8805	9965 000 45043	Cable LVDS 30p/90/30p	
8806	9965 100 03636	Cable 14p/170/14p	

1186	9965 100 02765	Loudspeaker 8Ω 3W
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19PFL5422D/27			
1050	9965 000 39713	LCD 19" A1-L02 CMO	
1053	9965 100 02769	Scaler Board assy [S]	
1054	9965 100 02791	IR & LED assy [I]	
1055	9965 100 02792	Keyb. & Control assy [K]	
1056	9965 100 02798	Power Board assy [P]	
1057	9965 100 02797	Side AV assy [SA]	
1058	9965 100 02763	Main frame/wire assy	
8804	9965 100 02766	Cable 110mm	
8805	9965 100 03635	Cable 30p LVDS	
8806	9965 100 03636	Cable 14p/170/14p	

1186	9965 100 02765	Loudspeaker 8Ω 3W
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19PFL5622D/37			
1050	9965 000 39713	LCD 19" A1-L02 CMO	
1053	9965 100 04251	Scaler Board assy [S]	
1054	9965 100 02791	IR & LED assy [I]	
1055	9965 100 04254	Keyb. & Control assy [K]	
1056	9965 000 45288	Power supply assy [P]	
1057	9965 100 02797	Side AV assy [SA]	
1058	9965 100 04252	DVD Transfer assy [DT]	
1059	9965 100 04253	DVD function assy [DF]	
1060	9965 100 02763	Main frame/wire assy	
8803	9965 100 04238	Cable 16p FF 520mm	
8804	9965 100 04241	Cable 2p/353	
8805	9965 100 03635	Cable 30p LVDS	
8806	9965 100 03636	Cable 14p/170/14p	
8807	9965 100 04239	Cable FF 16p/150	
8808	9965 100 04245	Cable 4p 150mm	
8809	9965 100 04244	Cable 4p 130mm	
8810	9965 100 04243	cabl 2p 350mm	
8811	9965 100 04223	DVD 9KDR0852AP0S	
8812	9965 100 04242	Cable 3p 525mm	

1186	9965 100 02765	Loudspeaker 8Ω 3W
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DVD Function Panel [DF]

Various

SW080	9965 000 42279	Switch SFKQGMA2125
SW081	9965 000 42279	Switch SFKQGMA2125
SW082	9965 000 42279	Switch SFKQGMA2125
SW083	9965 000 42279	Switch SFKQGMA2125
ZD080	9965 100 03711	Tact switch
ZD081	9965 100 03711	Tact switch
ZD082	9965 100 03711	Tact switch
ZD083	9965 100 03711	Tact switch

C080	9965 000 42228	100nF 16V X7R 0603
C080	9965 000 42260	10nF 50V X7R 0603
C081	9965 000 42228	100nF 16V X7R 0603
CN080	9965 100 04224	Connector 4p m

R080	9965 000 43490	5.6kΩ 5% 0.1W
R080	9965 000 44795	360Ω 5% 0.1W
R081	9965 000 44794	1.62 1% 0.1W
R081	9965 000 44795	360Ω 5% 0.1W
R082	9965 000 44794	1.62 1% 0.1W
R083	9965 000 42219	2.2kΩ 5% 1/10W
R084	9965 000 45330	180Ω 5% 0.1W
R085	9965 000 42212	0Ω 5% 1/10W
R086	9965 000 42212	0Ω 5% 1/10W
R087	9965 000 42212	0Ω 5% 1/10W
R088	9965 000 42212	0Ω 5% 1/10W
R089	9965 000 42212	0Ω 5% 1/10W

LED080	9965 100 04237	LED green
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Q080	9965 000 43944	BC847BW 100mA/45V
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DVD LED Panel [DL]

Various

SW090	9965 000 42278	Switch Tact SKQGAB
SW090	9965 000 42279	Switch SFKQGMA2125
ZD090	9965 100 03711	Tact switch
ZD091	9965 100 03711	Tact switch

C090	9965 000 42260	10nF 50V X7R 0603
C091	9965 000 42260	10nF 50V X7R 0603
CN090	9965 100 04224	Connector 4p m

R090	9965 000 43490	5.6kΩ 5% 0.1W
R091	9965 000 45330	180Ω 5% 0.1W
R092	9965 000 42219	2.2kΩ 5% 1/10W

Q090	9965 000 43944	BC847BW 100mA/45V
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DVD transfer Panel [DT]

CN074	9965 000 45310	Connector FF 0.5mm
CN075	9965 000 45310	Connector FF 0.5mm

R071	9965 000 42212	0Ω 5% 1/10W
R072	9965 000 42212	0Ω 5% 1/10W

IR & LED Panel [I]**Various**

SW001	9965 000 35740	Tact Switch TSPB-2-NP
SW001	9965 000 44878	SFKHHPM25C0-PL
SW001	9965 100 02796	Tact switch
SW001	9965 100 02877	Switch
SW001	9965 100 02878	Switch GY



C001	9965 000 42228	100nF 16V X7R 0603
C002	9965 000 42673	10nF 50V Y5V 20% 0603
C003	9965 000 42673	10nF 50V Y5V 20% 0603
C004	9965 000 42673	10nF 50V Y5V 20% 0603
C005	9965 000 42400	1µF 10V Y5V 20% 0603
C005	9965 000 43985	1µF 20% 16V
C006	9965 000 42673	10nF 50V Y5V 20% 0603



R001	9965 000 42218	220Ω 5% 1/10W
R001	9965 000 42219	2.2kΩ 5% 1/10W
R002	9965 000 42218	220Ω 5% 1/10W
R002	9965 000 42219	2.2kΩ 5% 1/10W
R003	9965 000 42214	10kΩ 5% 1/10W
R004	9965 000 42213	100Ω 5% 1/10W
R005	9965 000 42219	2.2kΩ 5% 1/10W
R006	9965 000 42214	10kΩ 5% 1/10W
R007	9965 000 42218	220Ω 5% 1/10W
R008	9965 000 42214	10kΩ 5% 1/10W
R009	9965 000 42214	10kΩ 5% 1/10W



LED001	9965 000 45268	KPB-3025SYKPBAC
LED001	9965 100 02879	VS L-3WEGW
LED001	9965 100 05112	VS L-3WEGW



Q001	9965 000 43944	BC847BW 100mA/45V
Q001	9965 100 02880	BC847BW 100mA/45V
Q002	9965 000 43944	BC847BW 100mA/45V
Q003	9965 000 43944	BC847BW 100mA/45V
Q004	9965 000 43944	BC847BW 100mA/45V
Q005	9965 000 43944	BC847BW 100mA/45V
U001	9965 000 42727	TSOP34136SB1

Inverter Board [IN]**Various**

F801	9965 000 44847	MET2.50
F801	9965 100 05093	Fuse 2.50A 250V
F901	9965 000 44847	MET2.50
F901	9965 100 05093	Fuse 2.50A 250V
PT801	9965 000 44849	Inverter TK.2043M.10
PT801	9965 100 02739	Inverter LI-SHIn
PT802	9965 000 44849	Inverter TK.2043M.10
PT802	9965 100 02739	Inverter LI-SHIn
ZD874	9965 000 36079	RLZ 5.6B LLDS
ZD874	9965 000 40620	RLZ5.6B
ZD874	9965 100 04051	RLZ5.6B
ZD874	9965 100 04052	RLZ 5.6B LLDS



C801	9965 000 44846	10PF 5% SL 3KV TDK
C801	9965 000 44973	15PF 3KV
C802	9965 000 44845	3PF,J,3KV,Z5P
C806	9965 000 44846	10PF 5% SL 3KV TDK
C809	9965 000 44845	3PF,J,3KV,Z5P
C811	9965 000 36073	1µF 25V 0805
C812	9965 000 36040	0.1µF 10% 25V
C813	9965 000 36996	390pF 50V
C813	9965 000 43889	560pF 50V 0805
C813	9965 000 43890	560pF 50V 0805
C819	9965 000 36039	0.01F 25V 0805
C820	9965 000 44843	470F 25V
C820	9965 000 44844	470F 25V
C821	9965 000 36073	1µF 25V 0805
C822	9965 000 44871	1500pF 50V 0805
C823	9965 000 44871	1500pF 50V 0805
C831	9965 000 36074	0.33µF 10% 25V 0805
C832	9965 000 36040	0.1µF 10% 25V

C838	9965 000 36991	1000pF 50V
C840	9965 000 44843	470F 25V
C840	9965 000 44844	470F 25V
C841	9965 000 36073	1µF 25V 0805
C842	9965 000 44871	1500pF 50V 0805
C843	9965 000 44871	1500pF 50V 0805
C846	9965 000 36073	1µF 25V 0805
C847	9965 000 36043	0.022F 25V 0805
C858	9965 000 36991	1000pF 50V
C860	9965 000 44873	330pF 50V
C860	9965 100 04039	100pF 50Vp 0805
C861	9965 000 44873	330pF 50V
C865	9965 000 36995	0.033F 50V
C874	9965 000 36040	0.1µF 10% 25V
C874	9965 000 36073	1µF 25V 0805
C880	9965 000 36040	0.1µF 10% 25V
C881	9965 000 36039	0.01F 25V 0805
C883	9965 000 36039	0.01F 25V 0805
C885	9965 000 36039	0.01F 25V 0805
C887	9965 000 36039	0.01F 25V 0805
CN831	9965 000 45325	Connector 2p
CN831	9965 100 02804	Connector 2p
CN831	9965 100 02805	Connector 2p
CN831	9965 100 10043	Connector 2p
CN833	9965 000 45325	Connector 2p
CN833	9965 100 02804	Connector 2p
CN833	9965 100 02805	Connector 2p
CN833	9965 100 10043	Connector 2p
CN841	9965 100 09616	Connector 2p
CN843	9965 100 09616	Connector 2p
CN851	9965 000 45325	Connector 2p
CN851	9965 100 02804	Connector 2p
CN851	9965 100 02805	Connector 2p
CN852	9965 100 09615	Connector 2p
CN853	9965 000 45325	Connector 2p
CN853	9965 100 02804	Connector 2p
CN853	9965 100 02805	Connector 2p



R804	9965 000 43381	10kΩ 1/10W
R807	9965 000 43381	10kΩ 1/10W
R811	9965 000 44860	3.3MΩ 0805
R812	9965 000 44861	620kΩ 5% 1/8W
R813	9965 000 44858	30kΩ 1% 1/8W
R813	9965 000 44978	47kΩ 1% 1/8W
R815	9965 000 44859	30kΩ 5% 1/8W
R816	9965 000 44854	20kΩ 1/10W
R819	9965 000 43382	1MΩ 1/10W
R820	9965 000 44856	27Ω 5% 1/8W
R821	9965 000 44856	27Ω 5% 1/8W
R822	9965 000 44856	27Ω 5% 1/8W
R823	9965 000 44856	27Ω 5% 1/8W
R824	9965 100 04039	100pF 50Vp 0805
R825	9965 100 04039	100pF 50Vp 0805
R829	9965 000 42284	0Ω 1/10W
R831	9965 000 43380	1kΩ 1/10W
R831	9965 100 05095	820Ω 5% 1/8W
R832	9965 100 05095	820Ω 5% 1/8W
R833	9965 000 43380	1kΩ 1/10W
R833	9965 100 05095	820Ω 5% 1/8W
R835	9965 000 44853	10kΩ 1% 1/8W
R836	9965 000 44853	10kΩ 1% 1/8W
R837	9965 000 44642	8.2kΩ 1% 1/10W
R838	9965 100 05095	820Ω 5% 1/8W
R839	9965 000 36083	6.2MΩ 5% 1/2W
R839	9965 000 44867	6.2MΩ 5% 1/2W
R841	9965 000 44856	27Ω 5% 1/8W
R842	9965 000 44856	27Ω 5% 1/8W
R843	9965 000 44856	27Ω 5% 1/8W
R844	9965 000 44856	27Ω 5% 1/8W
R849	9965 000 44853	10kΩ 1% 1/8W
R850	9965 000 44853	10kΩ 1% 1/8W
R851	9965 000 43380	1kΩ 1/10W
R853	9965 000 43380	1kΩ 1/10W
R854	9965 000 36083	6.2MΩ 5% 1/2W
R854	9965 000 44867	6.2MΩ 5% 1/2W
R855	9965 000 42284	0Ω 1/10W
R857	9965 000 44642	8.2kΩ 1% 1/10W
R861	9965 000 44863	150KΩ 1% 1/4W
R861	9965 000 44865	150KΩ 1% 0.6W
R861	9965 000 44869	150KΩ 1% 1/4W
R861	9965 000 44985	130KΩ 1% 0.6W
R861	9965 100 05096	130KΩ 1% 1/4W
R863	9965 000 44864	30KΩ 1% 1/6W
R863	9965 000 44866	30kΩ 1% 0.6W
R863	9965 000 44870	30KΩ 1% 1/6W
R863	9965 000 44983	27KΩ 1% 1/6W
R863	9965 000 44986	27kΩ 1% 0.6W
R865	9965 000 44855	226Ω 1% 1/8W
R865	9965 000 44977	360Ω 1% 1/8W
R871	9965 000 36988	10kΩ 5% 1/4W
R871	9965 000 43415	10kΩ 5% 1/6W

R871	9965 000 44862	10KΩ 5% 1/4W
R871	9965 000 44984	10kΩ 5% 1/16W
R871	9965 100 05105	10KΩ 5% 1/4W
R872	9965 000 39749	100kΩ 0805
R873	9965 000 44857	2.7kΩ 5% 1/8W
R874	9965 000 43393	330Ω 5% 1/8W
R880	9965 000 36988	10kΩ 5% 1/4W
R880	9965 000 43381	10kΩ 1/10W
R880	9965 000 44862	10KΩ 5% 1/4W
R880	9965 100 05105	10KΩ 5% 1/4W
R881	9965 000 39749	100kΩ 0805
R882	9965 000 43380	1kΩ 1/10W
R883	9965 000 39749	100kΩ 0805
R884	9965 000 43380	1kΩ 1/10W
R885	9965 000 39749	100kΩ 0805
R886	9965 000 43380	1kΩ 1/10W
R887	9965 000 39749	100kΩ 0805
R888	9965 000 43380	1kΩ 1/10W
RJ801	9965 000 42284	0Ω 1/10W



D831	9965 000 35994	BAV99
D831	9965 100 02756	D-BAV99W-7-F
D831	9965 100 02757	BAV99PT
D833	9965 000 35995	BAV70
D833	9965 100 02715	BAV70PT
D851	9965 000 35994	BAV99
D851	9965 100 02756	D-BAV99W-7-F
D851	9965 100 02757	BAV99PT
D853	9965 000 35995	BAV70
D853	9965 100 02715	BAV70PT
D881	9965 000 36035	LL4148WP
D881	9965 000 43891	MLL4148 SMD
D881	9965 100 03321	LL4148-GSO8
D881	9965 100 05242	LL4148WP
D883	9965 000 36035	LL4148WP
D883	9965 000 43891	MLL4148 SMD
D883	9965 100 03321	LL4148-GSO8
D885	9965 000 36035	LL4148WP
D885	9965 000 43891	MLL4148 SMD
D885	9965 100 03321	LL4148-GSO8
D887	9965 000 36035	LL4148WP
D887	9965 000 43891	MLL4148 SMD
D887	9965 100 03321	LL4148-GSO8



Q821	9965 000 36100	AM9945N
Q821	9965 100 02742	AO4828L SOIC-8
Q841	9965 000 36100	AM9945N
Q841	9965 100 02742	AO4828L SOIC-8
Q871	9965 000 36033	RK7002
Q871	9965 000 42650	2N7002
Q871	9965 000 42651	2N7002
Q871	9965 000 44975	RK7002
Q873	9965 000 36962	PDTA144WK SOT346
Q873	9965 000 44851	DTA144WKA
Q873	9965 100 04032	DTA144WKA
Q874	9965 000 35966	PMBS3904
Q874	9965 000 36961	KEC 2N3904S-RTK/PS
Q874	9965 000 44974	PMBS3904
Q874	9965 100 02429	PMBS3904
Q880	9965 000 36033	RK7002
Q880	9965 000 42650	2N7002
Q880	9965 000 42651	2N7002
Q880	9965 000 44975	RK7002
Q881	9965 000 36033	RK7002
Q881	9965 000 42650	2N7002
Q881	9965 000 42651	2N7002
Q881	9965 000 44975	RK7002
Q883	9965 000 36033	RK7002
Q883	9965 000 42650	2N7002
Q883	9965 000 42651	2N7002
Q885	9965 000 36033	RK7002
Q885	9965 000 42650	2N7002
Q885	9965 000 42651	2N7002
Q886	9965 000 36033	RK7002
Q886	9965 000 42650	2N7002
Q886	9965 000 42651	2N7002
U811	9965 000 36059	OZ9938

Keyboard & Control Board [K]**Various**

SW020	9965 000 35740	Tact Switch TSPB-2-NP
SW020	9965 000 42278	Switch Tact SKQGAB
SW020	9965 000 42279	Switch SFKQGA2125
SW020	9965 000 44878	SFKHHPM25C0-PL
SW020	9965 100 02794	Tact switch

SW020	9965 100 02796	Tact switch
SW020	9965 100 03599	Tact switch
SW021	9965 000 35740	Tact Switch TSPB-2-NP
SW021	9965 000 42278	Switch Tact SKQGAB
SW021	9965 000 42279	Switch SFKQGMA2125
SW021	9965 000 44878	SFKHHPM25C0-PL
SW021	9965 100 02794	Tact switch
SW021	9965 100 02796	Tact switch
SW021	9965 100 03598	Tact switch
SW021	9965 100 03599	Tact switch
SW022	9965 000 35740	Tact Switch TSPB-2-NP
SW022	9965 000 42278	Switch Tact SKQGAB
SW022	9965 000 42279	Switch SFKQGMA2125
SW022	9965 000 44878	SFKHHPM25C0-PL
SW022	9965 100 02794	Tact switch
SW022	9965 100 02796	Tact switch
SW022	9965 100 03598	Tact switch
SW022	9965 100 03599	Tact switch
SW023	9965 000 35740	Tact Switch TSPB-2-NP
SW023	9965 000 42278	Switch Tact SKQGAB
SW023	9965 000 42279	Switch SFKQGMA2125
SW023	9965 000 44878	SFKHHPM25C0-PL
SW023	9965 100 02794	Tact switch
SW023	9965 100 02796	Tact switch
SW023	9965 100 03598	Tact switch
SW023	9965 100 03599	Tact switch
SW024	9965 000 35740	Tact Switch TSPB-2-NP
SW024	9965 000 42278	Switch Tact SKQGAB
SW024	9965 000 42279	Switch SFKQGMA2125
SW024	9965 000 44878	SFKHHPM25C0-PL
SW024	9965 100 02794	Tact switch
SW024	9965 100 02796	Tact switch
SW024	9965 100 03598	Tact switch
SW025	9965 000 35740	Tact Switch TSPB-2-NP
SW025	9965 000 44878	SFKHHPM25C0-PL
SW025	9965 100 02794	Tact switch
SW025	9965 100 02796	Tact switch
ZD020	9965 100 03711	Tact switch
ZD021	9965 100 03711	Tact switch
ZD028	9965 100 03711	Tact switch



C020	9965 000 42260	10nF 50V X7R 0603
C020	9965 000 43488	100nF 25V 0603
C021	9965 000 42228	100nF 16V X7R 0603
C021	9965 000 42260	10nF 50V X7R 0603
C021	9965 000 43488	100nF 25V 0603
C022	9965 000 42260	10nF 50V X7R 0603



R020	9965 000 44043	11kΩ 5% 1/10W
R020	9965 100 02793	11kΩ 1% 0.1W
R020	9965 100 04229	11kΩ 1% 0.1W
R021	9965 000 44045	4.3kΩ 5% 1/10W
R022	9965 000 44044	1.8kΩ 5% 1/10W
R023	9965 000 42224	470Ω 5% 1/10W

LIPPS Board [L]

Various

F901	9965 100 02726	Fuse 2.5A 250V
FB902	9965 100 02720	Bead GBQM4.777.630
ZD925	9965 100 04053	RLZ18B LLDS



C900	9965 000 43824	470pF 10% 250VAC
C900	9965 100 02733	470pF 10% 250V AC
C901	9965 000 43824	470pF 10% 250VAC
C901	9965 100 02733	470pF 10% 250V AC
C907	9965 000 36086	100μF 450V
C908	9965 000 37794	Film Capacitor
C908	9965 000 43821	0.47μF 275VAC
C910	9965 100 07233	1000pF 250VAC
C913	9965 000 36041	0.1μF 50V X7R
C916	9965 000 44615	1nF 10% 50V 0805
C917	9965 000 45159	47μF 50V
C918	9965 100 09628	270p 10% 50V 0805
C920	9965 100 09619	1000pF 1kV
C920	9965 100 09632	1000pF 10% 1kV
C931	9965 100 09631	270pF 10% 500V
C932	9965 100 02800	1000μF 25V
C933	9965 100 02800	1000μF 25V
C934	9965 000 43916	470μF 20% 25V
C935	9965 100 09629	0.022F 50V
C937	9965 000 36041	0.1μF 50V X7R



R900	9965 100 06511	680Ω 5% 0.25W
R901	9965 100 06511	680Ω 5% 0.25W
R902	9965 100 06511	680Ω 5% 0.25W
R904	9965 100 04386	1MΩ 5% 1/4W
R905	9965 000 45151	100kΩ 5% 1W
R906	9965 100 04386	1MΩ 5% 1/4W
R907	9965 000 40048	10kΩ 1/8W
R913	9965 000 43973	10Ω 1/10W
R915	9965 000 43973	10Ω 1/10W
R916	9965 000 39749	100kΩ 0805
R917	9965 000 43397	470&8 1/10W
R919	9965 000 43390	22kΩ 5% 1/8W
R924	9965 100 09151	0.43Ω 5% 2W
R926	9965 000 45143	3.3Ω 1206
R930	9965 100 02743	2.43kΩ 1% 1/10W
R931	9965 000 45142	100Ω 1206
R932	9965 000 45142	100Ω 1206
R933	9965 100 04365	13kΩ 1% 1/8W
R936	9965 000 45144	1.5kΩ 5% 1/4W
R937	9965 000 43867	150Ω 5% 1/8W
R938	9965 000 43390	22kΩ 5% 1/8W
R939	9965 000 43876	4.7kΩ 5% 1/8W
RJ901	9965 000 39751	0Ω 1/8W
RV901	9965 100 09617	TVR10511KSY 510V



L901	9965 100 02444	Line Filter 15mH
L901	9965 100 02737	LF-001788-1
L902	9965 000 45127	Line Filter LISHIN
L902	9965 100 05240	Choke Coil
L921	9965 100 09622	Choke Coil 0.7H
L921	9965 100 09623	Choke Coil 0.7H
LED1	9965 100 09620	LED FGYG3004
LED1	9965 100 09621	LED
T901	9965 100 09624	XFMR PT-006892-1
T901	9965 100 09625	XFMR SRW28LEC



D901	9965 100 02721	RGP10M DO-204AL
D913	9965 000 39779	IN4148W
D913	9965 100 09630	MLL4148
D921	9965 100 02741	STPS20150CT
D921	9965 100 04054	SP20150R 20A/150V



IC901	9965 100 05241	LD7575PS
IC902	9965 000 40056	TCET1103G
IC921	9965 100 02780	AZ431AZ-AE1
Q901	9965 100 04225	2SK2996
BD901	9965 000 36386	U4KB80R
BD901	9965 000 37336	GBU408
NR901	9965 100 09618	4A/5Ω 20%

Power Supply Assy [P]

Various

F901	9965 000 45122	Fuse 2.5A 250V
FB902	9965 100 02720	Bead GBQM4.777.630
PT801	9965 000 44849	Inverter TK.2043M.10
PT801	9965 100 02739	Inverter LI-SHln
PT802	9965 000 44849	Inverter TK.2043M.10
PT802	9965 100 02739	Inverter LI-SHln
ZD874	9965 100 04051	RLZ5.6B
ZD874	9965 100 04052	RLZ 5.6B LLDS
ZD925	9965 100 04053	RLZ18B LLDS
ZD925	9965 100 06306	RLZ18B



C801	9965 100 03714	10pF 5% 3kV
C802	9965 100 03713	3pF 3kV
C806	9965 100 03714	10pF 5% 3kV
C810	9965 100 03713	3pF 3kV
C811	9965 000 36073	1μF 25V 0805
C812	9965 000 36041	0.1μF 50V X7R
C813	9965 000 45148	390pF +/-10% 50V
C813	9965 100 02754	470μF 25V
C813	9965 100 04233	390pF +/-10% 50V
C819	9965 000 36039	0.01F 25V 0805
C819	9965 000 43405	10nF -10% 50V
C820	9965 000 44843	470F 25V
C820	9965 000 44844	470F 25V
C821	9965 000 36073	1μF 25V 0805

C822	9965 000 44871	1500pF 50V 0805
C822	9965 000 45146	1.5nF 10% 50V 0805
C823	9965 000 44871	1500pF 50V 0805
C823	9965 000 45146	1.5nF 10% 50V 0805
C831	9965 000 36074	0.33μF 10% 25V 0805
C832	9965 000 36041	0.1μF 50V X7R
C838	9965 000 36991	1000pF 50V
C840	9965 000 44843	470F 25V
C840	9965 000 44844	470F 25V
C841	9965 000 36073	1μF 25V 0805
C842	9965 000 44871	1500pF 50V 0805
C842	9965 000 45146	1.5nF 10% 50V 0805
C843	9965 000 44871	1500pF 50V 0805
C843	9965 000 45146	1.5nF 10% 50V 0805
C846	9965 000 36073	1μF 25V 0805
C847	9965 100 02755	0.022μF 25V 0805
C847	9965 100 04232	22nF -10% 50V
C858	9965 000 36991	1000pF 50V
C860	9965 000 44872	270pF 50V
C861	9965 000 39769	220pF 50V
C861	9965 000 44872	270pF 50V
C865	9965 000 36995	0.033F 50V
C874	9965 000 36073	1μF 25V 0805
C880	9965 000 36041	0.1μF 50V X7R
C881	9965 000 36039	0.01F 25V 0805
C881	9965 000 43405	10nF -10% 50V
C883	9965 000 36039	0.01F 25V 0805
C883	9965 000 43405	10nF -10% 50V
C885	9965 000 36039	0.01F 25V 0805
C885	9965 000 43405	10nF -10% 50V
C887	9965 000 36039	0.01F 25V 0805
C887	9965 000 43405	10nF -10% 50V
C900	9965 000 43824	470pF 10% 250VAC
C900	9965 100 02733	470pF 10% 250V AC
C901	9965 000 43824	470pF 10% 250VAC
C901	9965 100 02733	470pF 10% 250V AC
C907	9965 000 45117	120μF 450V
C907	9965 100 02801	120F 450V
C907	9965 100 02802	120μF 450V
C908	9965 000 37794	Film Capacitor
C908	9965 000 43821	0.47μF 275VAC
C910	9965 000 43353	Safety Y-CAP 1.5nF
C910	9965 000 44612	1500pF 250V
C913	9965 000 36041	0.1μF 50V X7R
C916	9965 000 44615	1nF 10% 50V 0805
C917	9965 000 45159	47μF 50V
C920	9965 000 43907	2200pF 500V
C920	9965 000 43908	2200pF 500V
C920	9965 000 45320	2200pF 10% 500V
C920	9965 100 04235	2200pF 10% 500V
C931	9965 000 45157	1000pF 10% 500V
C932	9965 100 02800	1000μF 25V
C933	9965 100 02800	1000μF 25V
C934	9965 100 02800	1000μF 25V
C935	9965 000 39770	0.022μF 50V 0805
C936	9965 000 44824	1000μF 10V
C936	9965 000 45321	1000μF 10v
C936	9965 100 02724	1000F 10V
C937	9965 000 36041	0.1μF 50V X7R
C939	9965 100 02753	270pF 50V
C939	9965 100 04231	270pF 10% 50V 0603
C940	9965 000 44615	1nF 10% 50V 0805
C942	9965 100 05859	0.01F 50V 0805
C944	9965 000 36041	0.1μF 50V X7R
CN831	9965 100 02804	Connector 2p
CN831	9965 100 02805	Connector 2p
CN833	9965 100 02804	Connector 2p
CN833	9965 100 02805	Connector 2p
CN851	9965 100 02804	Connector 2p
CN851	9965 100 02805	Connector 2p
CN853	9965 100 02804	Connector 2p
CN853	9965 100 02805	Connector 2p



R804	9965 000 43381	10kΩ 1/10W
R806	9965 000 39749	100kΩ 0805
R807	9965 000 44297	10kΩ 5% 1/8W
R811	9965 000 44860	3.3MΩ 0805
R812	9965 000 44861	620kΩ 5% 1/8W
R813	9965 000 44978	47kΩ 1% 1/8W
R813	9965 000 45323	38.8kΩ 0.1W
R815	9965 000 44859	30kΩ 5% 1/8W
R816	9965 000 44854	20kΩ 1/10W
R819	9965 000 43382	1MΩ 1/10W
R820	9965 000 44856	27Ω 5% 1/8W
R821	9965 000 44856	27Ω 5% 1/8W
R822	9965 000 44856	27Ω 5% 1/8W
R823	9965 000 44856	27Ω 5% 1/8W
R824	9965 100 04039	100pF 50Vp 0805
R825	9965 100 04039	100pF 50Vp 0805
R829	9965 000 42284	0Ω 1/10W
R831	9965 000 43380	1kΩ 1/10W

R833	9965 000 43380	1kΩ 1/10W
R835	9965 000 44853	10kΩ 1% 1/8W
R836	9965 000 44853	10kΩ 1% 1/8W
R837	9965 000 45139	7.5kΩ 1% 1/8W
R839	9965 000 36083	6.2MΩ 5% 1/2W
R839	9965 000 44867	6.2MΩ 5% 1/2W
R841	9965 000 44856	27Ω 5% 1/8W
R842	9965 000 44856	27Ω 5% 1/8W
R843	9965 000 44856	27Ω 5% 1/8W
R844	9965 000 44856	27Ω 5% 1/8W
R849	9965 000 44853	10kΩ 1% 1/8W
R850	9965 000 44853	10kΩ 1% 1/8W
R851	9965 000 43380	1kΩ 1/10W
R853	9965 000 43380	1kΩ 1/10W
R854	9965 000 36083	6.2MΩ 5% 1/2W
R854	9965 000 44867	6.2MΩ 5% 1/2W
R855	9965 000 42284	0Ω 1/10W
R857	9965 000 45139	7.5kΩ 1% 1/8W
R861	9965 100 02718	180kΩ 1% 1/6W
R861	9965 100 04227	180kΩ 1% 0.6W
R863	9965 000 45324	33kΩ 1% 0.6W
R863	9965 100 02719	33kΩ 1% 1/6W
R865	9965 000 45137	215Ω 1% 1/10W
R871	9965 000 36988	10kΩ 5% 1/4W
R871	9965 000 43415	10kΩ 5% 1/6W
R871	9965 100 02717	10kΩ 5% 1/4W
R871	9965 100 04228	10kΩ 5% 1/6W
R872	9965 000 39749	100kΩ 0805
R873	9965 000 44857	2.7kΩ 5% 1/8W
R874	9965 000 43393	330Ω 5% 1/8W
R880	9965 000 36988	10kΩ 5% 1/4W
R880	9965 000 43415	10kΩ 5% 1/6W
R880	9965 100 02717	10kΩ 5% 1/4W
R880	9965 100 04228	10kΩ 5% 1/6W
R881	9965 000 39749	100kΩ 0805
R882	9965 000 43380	1kΩ 1/10W
R883	9965 000 39749	100kΩ 0805
R884	9965 000 43380	1kΩ 1/10W
R885	9965 000 39749	100kΩ 0805
R886	9965 000 43380	1kΩ 1/10W
R887	9965 000 39749	100kΩ 0805
R888	9965 000 43380	1kΩ 1/10W
R900	9965 000 45140	560kΩ 5% 1/4W
R901	9965 000 45140	560kΩ 5% 1/4W
R902	9965 000 45140	560kΩ 5% 1/4W
R904	9965 000 45141	620kΩ 5% 1/4W
R905	9965 000 45151	100kΩ 5% 1W
R906	9965 000 45141	620kΩ 5% 1/4W
R907	9965 000 40048	10kΩ 1/8W
R908	9965 000 45141	620kΩ 5% 1/4W
R913	9965 000 43973	10Ω 1/10W
R915	9965 000 43388	22Ω 1/10W
R916	9965 000 39749	100kΩ 0805
R917	9965 000 45138	680Ω 5% 1/8W
R918	9965 000 45138	680Ω 5% 1/8W
R919	9965 000 43390	22kΩ 5% 1/8W
R924	9965 100 02799	0.36 5% 2W
R926	9965 000 45143	3.3Ω 1206
R930	9965 100 02743	2.43kΩ 1% 1/10W
R931	9965 000 45142	100Ω 1206
R932	9965 000 45142	100Ω 1206
R933	9965 000 45136	13.3kΩ 1% 1/8W
R934	9965 100 05900	330Ω 1% 1/10W
R935	9965 000 43380	1kΩ 1/10W
R936	9965 000 45144	1.5kΩ 5% 1/4W
R937	9965 000 43379	100Ω 5% 1/8W
R938	9965 000 43390	22kΩ 5% 1/8W
R939	9965 100 05899	10kΩ 1% 1/10W
R942	9965 000 42735	47kΩ 5% 1/8W
R943	9965 100 04226	22kΩ 5% 0.25W
R944	9965 100 04434	3.3kΩ 1% 0.1W
R945	9965 100 05898	100Ω 5% 1/10W
RV901	9965 100 02807	TVR10561KFW 560V



L901	9965 100 02737	LF-001788-1
L901	9965 100 02738	Line Filter
L902	9965 000 45125	Choke coil
L902	9965 000 45127	Line Filter LISHIN
L921	9965 000 40058	0.8H
L921	9965 100 02442	Choke coil
L924	9965 000 42610	Choke Coil
L924	9965 000 43841	Choke 35μH 10% 82MΩ
T901	9965 000 45131	PPH6003FL
T901	9965 100 04236	PT-007849



D831	9965 000 35994	BAV99
D831	9965 100 02756	D-BAV99W-7-F
D831	9965 100 02757	BAV99PT

D833	9965 000 35995	BAV70
D833	9965 100 02715	BAV70PT
D851	9965 000 35994	BAV99
D851	9965 100 02756	D-BAV99W-7-F
D851	9965 100 02757	BAV99PT
D853	9965 000 35995	BAV70
D853	9965 100 02715	BAV70PT
D881	9965 000 36035	LL4148WP
D881	9965 000 43891	MLL4148 SMD
D881	9965 100 03321	LL4148-GSO8
D883	9965 000 36035	LL4148WP
D883	9965 000 43891	MLL4148 SMD
D883	9965 100 03321	LL4148-GSO8
D885	9965 000 36035	LL4148WP
D885	9965 000 43891	MLL4148 SMD
D885	9965 100 03321	LL4148-GSO8
D887	9965 000 36035	LL4148WP
D887	9965 000 43891	MLL4148 SMD
D887	9965 100 03321	LL4148-GSO8
D901	9965 000 45155	RGP10M DO-204AL
D908	9965 000 45319	SM240A DO-214AC
D912	9965 000 40067	RGP10-DO-204AL
D912	9965 000 43436	RGP10D
D912	9965 000 45156	RGP10D
D913	9965 000 43891	MLL4148 SMD
D913	9965 100 03321	LL4148-GSO8
D913	9965 100 03327	BAS32L
D921	9965 000 45135	STPS20150CT
D921	9965 100 04054	SP20150R 20A/150V



IC901	9965 000 39747	LD7575PS SOP-8
IC902	9965 000 40055	PC123 Y82FZ0F
IC902	9965 000 40056	TCET1103G
IC921	9965 000 43819	TL431CZ-AP
IC921	9965 100 02780	AZ431AZ-AE1
IC922	9965 000 45316	AP1520SA
Q821	9965 100 02742	AO4828L SOIC-8
Q821	9965 100 04033	AM9945N
Q841	9965 100 02742	AO4828L SOIC-8
Q841	9965 100 04033	AM9945N
Q871	9965 000 36033	RK7002
Q871	9965 000 42650	2N7002
Q871	9965 000 42651	2N7002
Q873	9965 000 36962	PDTA144WK SOT346
Q873	9965 100 04032	DTA144WKA
Q874	9965 000 35966	PMBS3904
Q874	9965 000 36961	KEC 2N3904S-RTK/PS
Q880	9965 000 36033	RK7002
Q880	9965 000 42650	2N7002
Q880	9965 000 42651	2N7002
Q881	9965 000 36033	RK7002
Q881	9965 000 42650	2N7002
Q881	9965 000 42651	2N7002
Q883	9965 000 36033	RK7002
Q883	9965 000 42650	2N7002
Q883	9965 000 42651	2N7002
Q885	9965 000 36033	RK7002
Q885	9965 000 42650	2N7002
Q885	9965 000 42651	2N7002
Q886	9965 000 36033	RK7002
Q886	9965 000 42650	2N7002
Q886	9965 000 42651	2N7002
Q901	9965 100 02740	STP10NK70ZFP
Q901	9965 100 04225	2SK2996
Q905	9965 000 35966	PMBS3904
BD901	9965 000 37336	GBU408
BD901	9965 100 02803	GBU408
BD901	9965 100 03637	U4KB80R
NR901	9965 100 02806	SCK13074MGY001 4A/ 7Ω 20%
U811	9965 100 04031	OZ9938

Scaler Board [S]

Various

0291	9965 100 10042	
0615	9965 100 10041	
1257	9965 100 02787	Tuner + Eeprom
1257	9965 100 02789	Tuner + Eeprom
1257	9965 100 04258	Tuner + Eeprom
1257	9965 100 04259	Tuner + Eeprom
1258	9965 100 02786	Power supply
1258	9965 100 04248	CPU assy
1301	9965 000 45110	EEPROM assy
1301	9965 100 05244	EEPROM assy
1301	9965 100 05866	EEPROM assy
1301	9965 100 10099	EEPROM assy
1302	9965 100 05245	EEPROM assy

1302	9965 100 05865	EEPROM assy
1302	9965 100 10100	EEPROM assy
1302	9965 100 10101	EEPROM assy
FB101	9965 000 36053	Ferr. Bead
FB101	9965 000 43918	75Ω W6 RH 3.5X10X
FB101	9965 000 43919	80Ω BF30TA 3.5X9X
FB101	9965 100 03567	BF30TA-2
FB101	9965 100 03568	Ferrite Core 35Ω W5
FB150	9965 100 02775	Bead 120Ω/500mA
FB150	9965 100 03317	Bead 120Ω/500mA
FB151	9965 100 02775	Bead 120Ω/500mA
FB151	9965 100 03317	Bead 120Ω/500mA
FB152	9965 100 02775	Bead 120Ω/500mA
FB152	9965 100 03317	Bead 120Ω/500mA
FB201	9965 100 02775	Bead 120Ω/500mA
FB201	9965 100 03317	Bead 120Ω/500mA
FB202	9965 100 02775	Bead 120Ω/500mA
FB202	9965 100 03317	Bead 120Ω/500mA
FB203	9965 100 03317	Bead 120Ω/500mA
FB250	9965 000 43995	Bead 600Ω/200mA
FB250	9965 000 43997	Bead 600Ω/500mA
FB251	9965 000 43995	Bead 600Ω/200mA
FB251	9965 000 43997	Bead 600Ω/500mA
FB252	9965 000 43995	Bead 600Ω/200mA
FB252	9965 000 43997	Bead 600Ω/500mA
FB253	9965 000 43995	Bead 600Ω/200mA
FB253	9965 000 43997	Bead 600Ω/500mA
FB254	9965 100 02775	Bead 120Ω/500mA
FB254	9965 100 03317	Bead 120Ω/500mA
FB255	9965 000 43995	Bead 600Ω/200mA
FB255	9965 000 43997	Bead 600Ω/500mA
FB256	9965 000 43995	Bead 600Ω/200mA
FB256	9965 000 43997	Bead 600Ω/500mA
FB257	9965 000 43995	Bead 600Ω/200mA
FB257	9965 000 43997	Bead 600Ω/500mA
FB350	9965 000 42268	220Ω at 100MHz 0805
FB351	9965 000 43995	Bead 600Ω/200mA
FB351	9965 000 43997	Bead 600Ω/500mA
FB352	9965 000 43995	Bead 600Ω/200mA
FB352	9965 000 43997	Bead 600Ω/500mA
FB354	9965 000 42268	220Ω at 100MHz 0805
FB355	9965 000 42268	220Ω at 100MHz 0805
FB356	9965 000 42268	220Ω at 100MHz 0805
FB401	9965 000 43995	Bead 600Ω/200mA
FB401	9965 000 43997	Bead 600Ω/500mA
FB402	9965 000 43995	Bead 600Ω/200mA
FB402	9965 000 43997	Bead 600Ω/500mA
FB403	9965 000 43995	Bead 600Ω/200mA
FB403	9965 000 43997	Bead 600Ω/500mA
FB404	9965 000 43995	Bead 600Ω/200mA
FB404	9965 000 43997	Bead 600Ω/500mA
FB405	9965 000 43995	Bead 600Ω/200mA
FB405	9965 000 43997	Bead 600Ω/500mA
FB406	9965 000 43995	Bead 600Ω/200mA
FB406	9965 000 43997	Bead 600Ω/500mA
FB408	9965 000 43995	Bead 600Ω/200mA
FB408	9965 000 43997	Bead 600Ω/500mA
FB409	9965 000 43995	Bead 600Ω/200mA
FB409	9965 000 43997	Bead 600Ω/500mA
FB410	9965 000 43995	Bead 600Ω/200mA
FB410	9965 000 43997	Bead 600Ω/500mA
FB411	9965 000 43995	Bead 600Ω/200mA
FB411	9965 000 43997	Bead 600Ω/500mA
FB650	9965 000 43995	Bead 600Ω/200mA
FB760	9965 000 43995	Bead 600Ω/200mA
FB760	9965 000 43997	Bead 600Ω/500mA
FB761	9965 000 43995	Bead 600Ω/200mA
FB761	9965 000 43997	Bead 600Ω/500mA
FB801	9965 000 43995	Bead 600Ω/200mA
FB801	9965 000 43997	Bead 600Ω/500mA
FB802	9965 100 02776	Bead 120Ω 3A
FB803	9965 100 02776	Bead 120Ω 3A
FB804	9965 100 02776	Bead 120Ω 3A
FB805	9965 100 02776	Bead 120Ω 3A
FB851	9965 100 02775	Bead 120Ω/500mA
FB851	9965 100 03317	Bead 120Ω/500mA
TU201	9965 000 44034	Tuner FQD1236/F
TU202	9965 100 02821	TDQU4-507A
X250	9965 000 44013	Xtal 25MHz 20p HC49/S
X250	9965 000 44014	Xtal 25MHz 20p HC49/S
X250	9965 100 03276	Xtal 25MHz 20p HC49/S
X250	9965 100 03534	Xtal 25MHz 20p HC49/S
X350	9965 000 44601	Xls/Osc. 27Mhz
X350	9965 000 44602	Crystal 27Mhz
X350	9965 100 03224	Crystal 27Mhz
X350	9965 100 03536	Crystal 27Mhz
X350	9965 100 05116	Crystal / Osc 27MHz
X350	9965 100 05117	Crystal / Osc 27MHz
ZD102	9965 000 37806	SMD
ZD103	9965 000 37806	SMD
ZD104	9965 000 37806	SMD
ZD105	9965 000 37806	SMD
ZD151	9965 000 37806	SMD

— —			C261	9965 000 42680	18pF 50V NPO 5% 0603	C430	9965 000 42235	47µF 25V 6.3X5.3mm
			C262	9965 000 42228	100nF 16V X7R 0603	C430	9965 100 03697	47µF 25V
			C263	9965 000 42228	100nF 16V X7R 0603	C430	9965 100 05108	47µF 25V
			C264	9965 000 42403	10µF 25V 20% 1210	C431	9965 000 42228	100nF 16V X7R 0603
			C264	9965 000 45205	10µF 10V 0805	C432	9965 000 42228	100nF 16V X7R 0603
C100	9965 000 42403	10µF 25V 20% 1210	C265	9965 000 42228	100nF 16V X7R 0603	C434	9965 000 42403	10µF 25V 20% 1210
C101	9965 000 42403	10µF 25V 20% 1210	C266	9965 000 42228	100nF 16V X7R 0603	C434	9965 000 45205	10µF 10V 0805
C102	9965 000 43645	100µF 25V	C267	9965 000 42228	100nF 16V X7R 0603	C435	9965 000 42228	100nF 16V X7R 0603
C103	9965 000 43980	100nF 20% 25V 0603	C268	9965 000 42228	100nF 16V X7R 0603	C436	9965 000 42228	100nF 16V X7R 0603
C104	9965 000 42233	10µF 20% 10V 1206	C269	9965 000 42228	100nF 16V X7R 0603	C437	9965 000 42228	100nF 16V X7R 0603
C105	9965 000 42233	10µF 20% 10V 1206	C270	9965 000 42228	100nF 16V X7R 0603	C438	9965 000 42228	100nF 16V X7R 0603
C106	9965 000 43980	100nF 20% 25V 0603	C271	9965 000 42228	100nF 16V X7R 0603	C439	9965 000 42228	100nF 16V X7R 0603
C107	9965 000 43916	470µF 20% 25V	C272	9965 000 42228	100nF 16V X7R 0603	C440	9965 000 42228	100nF 16V X7R 0603
C108	9965 000 43980	100nF 20% 25V 0603	C273	9965 000 42228	100nF 16V X7R 0603	C441	9965 000 42228	100nF 16V X7R 0603
C109	9965 000 42403	10µF 25V 20% 1210	C274	9965 000 42403	10µF 25V 20% 1210	C442	9965 000 42228	100nF 16V X7R 0603
C110	9965 000 42682	220pF -10% 50V	C274	9965 000 45205	10µF 10V 0805	C443	9965 000 42403	10µF 25V 20% 1210
C111	9965 000 42684	22nF -10% 50V	C275	9965 000 42228	100nF 16V X7R 0603	C443	9965 000 44016	10µF 10% 16V
C112	9965 000 44824	1000µF 10V	C276	9965 000 42228	100nF 16V X7R 0603	C443	9965 000 44017	10µF 20% 16V
C113	9965 000 42260	10nF 50V X7R 0603	C277	9965 000 42228	100nF 16V X7R 0603	C443	9965 100 02770	10µF 16V
C114	9965 000 44825	330µF 16V	C278	9965 000 42228	100nF 16V X7R 0603	C443	9965 100 05106	10µF 16V
C115	9965 000 42260	10nF 50V X7R 0603	C279	9965 000 42228	100nF 16V X7R 0603	C444	9965 000 42228	100nF 16V X7R 0603
C116	9965 000 42403	10µF 25V 20% 1210	C280	9965 000 42228	100nF 16V X7R 0603	C445	9965 000 42228	100nF 16V X7R 0603
C117	9965 000 44824	1000µF 10V	C281	9965 000 42403	10µF 25V 20% 1210	C446	9965 000 42228	100nF 16V X7R 0603
C118	9965 000 44824	1000µF 10V	C281	9965 000 45205	10µF 10V 0805	C447	9965 000 42228	100nF 16V X7R 0603
C120	9965 000 42682	220pF -10% 50V	C282	9965 000 42228	100nF 16V X7R 0603	C449	9965 000 42228	100nF 16V X7R 0603
C121	9965 000 42684	22nF -10% 50V	C283	9965 000 42228	100nF 16V X7R 0603	C450	9965 000 42403	10µF 25V 20% 1210
C150	9965 000 42403	10µF 25V 20% 1210	C284	9965 000 42228	100nF 16V X7R 0603	C450	9965 000 44016	10µF 10% 16V
C153	9965 000 43980	100nF 20% 25V 0603	C285	9965 000 42228	100nF 16V X7R 0603	C450	9965 000 44017	10µF 20% 16V
C154	9965 000 42235	47µF 25V 6.3X5.3mm	C286	9965 000 42228	100nF 16V X7R 0603	C450	9965 100 02770	10µF 16V
C154	9965 100 03697	47µF 25V	C350	9965 000 42228	100nF 16V X7R 0603	C450	9965 100 05106	10µF 16V
C154	9965 100 05108	47µF 25V	C351	9965 000 42403	10µF 25V 20% 1210	C451	9965 000 42228	100nF 16V X7R 0603
C155	9965 000 43980	100nF 20% 25V 0603	C351	9965 000 45205	10µF 10V 0805	C452	9965 000 42228	100nF 16V X7R 0603
C156	9965 000 43645	100µF 25V	C353	9965 000 42228	100nF 16V X7R 0603	C453	9965 000 42228	100nF 16V X7R 0603
C160	9965 000 43980	100nF 20% 25V 0603	C354	9965 000 42228	100nF 16V X7R 0603	C454	9965 000 42228	100nF 16V X7R 0603
C161	9965 000 42235	47µF 25V 6.3X5.3mm	C355	9965 000 42260	10nF 50V X7R 0603	C455	9965 000 42228	100nF 16V X7R 0603
C161	9965 100 03697	47µF 25V	C356	9965 000 43977	1nF 5% 25V 0603	C456	9965 000 42228	100nF 16V X7R 0603
C161	9965 100 05108	47µF 25V	C357	9965 000 42690	47pF 50V NPO 5% 0603	C457	9965 000 42228	100nF 16V X7R 0603
C165	9965 000 43980	100nF 20% 25V 0603	C358	9965 000 42229	22pF 50V NPO 0603	C459	9965 000 42228	100nF 16V X7R 0603
C166	9965 000 42235	47µF 25V 6.3X5.3mm	C359	9965 000 42403	10µF 25V 20% 1210	C460	9965 000 42228	100nF 16V X7R 0603
C166	9965 100 03697	47µF 25V	C359	9965 000 45205	10µF 10V 0805	C461	9965 000 42228	10µF 25V 20% 1210
C166	9965 100 05108	47µF 25V	C360	9965 000 42403	10µF 25V 20% 1210	C461	9965 000 44018	10µF 10% 16V
C167	9965 000 43994	10µF 16V	C360	9965 000 45205	10µF 10V 0805	C461	9965 000 45057	10µF 10% 16V
C168	9965 000 37776	100µF 25V	C361	9965 000 42228	10µF 16V X7R 0603	C461	9965 000 45205	10µF 10V 0805
C168	9965 000 43645	100µF 25V	C362	9965 000 43978	10pF 5% 50V 0603	C462	9965 000 42228	100nF 16V X7R 0603
C169	9965 000 37776	100µF 25V	C363	9965 000 42260	10nF 50V X7R 0603	C463	9965 000 42228	100nF 16V X7R 0603
C169	9965 000 43645	100µF 25V	C364	9965 000 42260	10nF 50V X7R 0603	C464	9965 000 42228	100nF 16V X7R 0603
C171	9965 000 43980	100nF 20% 25V 0603	C365	9965 000 42260	10nF 50V X7R 0603	C465	9965 000 42228	100nF 16V X7R 0603
C172	9965 000 43994	10µF 16V	C367	9965 000 42260	10nF 50V X7R 0603	C466	9965 000 42228	100nF 16V X7R 0603
C173	9965 000 42235	47µF 25V 6.3X5.3mm	C368	9965 000 42260	10nF 50V X7R 0603	C467	9965 000 42228	100nF 16V X7R 0603
C173	9965 100 03697	47µF 25V	C371	9965 000 42260	10nF 50V X7R 0603	C468	9965 000 43988	4.7µF 10% 10V
C173	9965 100 05108	47µF 25V	C372	9965 000 42260	10nF 50V X7R 0603	C468	9965 100 03698	4.7µF +/-10% 10V
C174	9965 000 42260	10nF 50V X7R 0603	C373	9965 000 45205	10µF 10V 0805	C469	9965 000 42228	100nF 16V X7R 0603
C175	9965 000 44823	470µF 16V	C401	9965 000 42228	100nF 16V X7R 0603	C472	9965 000 44835	10nF 10% 16V
C176	9965 000 37776	100µF 25V	C402	9965 000 42228	100nF 16V X7R 0603	C473	9965 000 44835	10nF 10% 16V
C176	9965 000 43645	100µF 25V	C403	9965 000 42228	100nF 16V X7R 0603	C501	9965 000 42228	100nF 16V X7R 0603
C177	9965 000 37776	100µF 25V	C404	9965 000 42228	100nF 16V X7R 0603	C502	9965 000 37776	100µF 25V
C177	9965 000 43645	100µF 25V	C405	9965 000 43988	4.7µF 10% 10V	C502	9965 000 43645	100µF 25V
C178	9965 000 43980	100nF 20% 25V 0603	C405	9965 100 03698	4.7µF +/-10% 10V	C503	9965 100 03699	220µF 25V
C201	9965 000 42228	100nF 16V X7R 0603	C406	9965 000 42228	100nF 16V X7R 0603	C503	9965 100 05107	2200µF 25V
C202	9965 000 37776	100µF 25V	C407	9965 000 43988	4.7µF 10% 10V	C504	9965 000 42228	100nF 16V X7R 0603
C202	9965 000 43645	100µF 25V	C407	9965 100 03698	4.7µF +/-10% 10V	C505	9965 000 42228	100nF 16V X7R 0603
C203	9965 000 37776	100µF 25V	C408	9965 000 42228	100nF 16V X7R 0603	C506	9965 000 42403	10µF 25V 20% 1210
C203	9965 000 43645	100µF 25V	C409	9965 000 42228	100nF 16V X7R 0603	C506	9965 000 45205	10µF 10V 0805
C204	9965 000 42260	10nF 50V X7R 0603	C410	9965 000 42228	100nF 16V X7R 0603	C507	9965 000 42235	47µF 25V 6.3X5.3mm
C205	9965 000 42403	10µF 25V 20% 1210	C411	9965 000 42228	100nF 16V X7R 0603	C507	9965 100 03697	47µF 25V
C205	9965 000 45205	10µF 10V 0805	C412	9965 000 42228	100nF 16V X7R 0603	C507	9965 100 05108	47µF 25V
C206	9965 000 42228	100nF 16V X7R 0603	C413	9965 000 43916	470µF 20% 25V	C508	9965 000 42228	100nF 16V X7R 0603
C207	9965 000 42232	47nF 16V X7R 0603	C414	9965 000 43988	4.7µF 10% 10V	C509	9965 000 42228	100nF 16V X7R 0603
C208	9965 000 42678	15pF -5% 50V 0603	C414	9965 100 03698	4.7µF +/-10% 10V	C510	9965 000 42228	100nF 16V X7R 0603
C209	9965 000 42678	15pF -5% 50V 0603	C415	9965 000 42228	100nF 16V X7R 0603	C511	9965 000 42228	100nF 16V X7R 0603
C210	9965 000 42690	47pF 50V NPO 5% 0603	C416	9965 000 42228	100nF 16V X7R 0603	C512	9965 000 42228	100nF 16V X7R 0603
C211	9965 000 42235	47µF 25V 6.3X5.3mm	C417	9965 000 43988	4.7µF 10% 10V	C513	9965 000 42228	100nF 16V X7R 0603
C211	9965 100 03697	47µF 25V	C417	9965 100 03698	4.7µF +/-10% 10V	C514	9965 000 42228	100nF 16V X7R 0603
C211	9965 100 05108	47µF 25V	C418	9965 000 42228	100nF 16V X7R 0603	C515	9965 000 42228	100nF 16V X7R 0603
C212	9965 000 43984	5.6pF 50V 0603	C419	9965 000 42228	100nF 16V X7R 0603	C516	9965 000 42228	100nF 16V X7R 0603
C213	9965 000 42678	15pF -5% 50V 0603	C420	9965 000 42228	100nF 16V X7R 0603	C517	9965 000 42228	100nF 16V X7R 0603
C214	9965 000 42235	47µF 25V 6.3X5.3mm	C421	9965 000 42228	100nF 16V X7R 0603	C518	9965 000 42228	100nF 16V X7R 0603
C214	9965 100 03697	47µF 25V	C422	9965 000 42403	10µF 25V 20% 1210	C519	9965 000 42228	100nF 16V X7R 0603
C214	9965 100 05108	47µF 25V	C422	9965 000 44018	10µF 10% 16V	C520	9965 000 42228	100nF 16V X7R 0603
C215	9965 000 42228	100nF 16V X7R 0603	C422	9965 000 45057	10µF 10% 16V	C521	9965 000 42228	100nF 16V X7R 0603
C216	9965 000 42260	10nF 50V X7R 0603	C422	9965 000 45205	10µF 10V 0805	C522	9965 000 42228	100nF 16V X7R 0603
C217	9965 000 42219	2.2kΩ 5% 1/10W	C422	9965 100 02770	10µF 16V	C523	9965 000 42228	100nF 16V X7R 0603
C219	9965 000 44038	220kΩ 5% 1/10W	C423	9965 000 42228	100nF 16V X7R 0603	C524	9965 000 42228	100nF 16V X7R 0603
C220	9965 000 42215	100kΩ 5% 1/10W	C424	9965 000 42228	100nF 16V X7R 0603	C525	9965 000 42228	100nF 16V X7R 0603
C250	9965 000 42228	100nF 16V X7R 0603	C425	9965 000 42228	100nF 16V X7R 0603	C526	9965 000 42228	100nF 16V X7R 0603
C251	9965 00							

C535	9965 000 42228	100nF 16V X7R 0603	C675	9965 000 42690	47pF 50V NPO 5% 0603	C826	9965 000 43884	220pF 50V 0805
C536	9965 000 42228	100nF 16V X7R 0603	C676	9965 000 43983	47nF 20 50V	C827	9965 000 43980	100nF 20% 25V 0603
C537	9965 000 42228	100nF 16V X7R 0603	C701	9965 000 42228	100nF 16V X7R 0603	C828	9965 000 44245	220nF 10% 25V 0805
C538	9965 000 37776	100µF 25V	C725	9965 000 42228	100nF 16V X7R 0603	C829	9965 000 44245	220nF 10% 25V 0805
C538	9965 000 43645	100µF 25V	C726	9965 000 43977	1nF 5% 25V 0603	C830	9965 000 43980	100nF 20% 25V 0603
C539	9965 000 42228	100nF 16V X7R 0603	C727	9965 000 42260	10nF 50V X7R 0603	C831	9965 000 43980	100nF 20% 25V 0603
C540	9965 000 42228	100nF 16V X7R 0603	C728	9965 000 43980	100nF 20% 25V 0603	C833	9965 000 42259	100pF 50V 0603
C541	9965 000 42228	100nF 16V X7R 0603	C729	9965 000 42692	5pF -10% 50V	C834	9965 000 42259	100pF 50V 0603
C542	9965 000 42228	100nF 16V X7R 0603	C729	9965 100 03700	5pF 50V	C835	9965 000 43989	470nF 20% 50V
C543	9965 000 42228	100nF 16V X7R 0603	C730	9965 000 42260	10nF 50V X7R 0603	C835	9965 000 45309	680nF 20% 50V 1206
C544	9965 000 42228	100nF 16V X7R 0603	C731	9965 000 42260	10nF 50V X7R 0603	C835	9965 100 04234	680nF 50V 1206
C545	9965 000 42228	100nF 16V X7R 0603	C732	9965 000 42692	5pF -10% 50V	C836	9965 000 43980	100nF 20% 25V 0603
C546	9965 000 42228	100nF 16V X7R 0603	C732	9965 100 03700	5pF 50V	C839	9965 000 44025	22µF 20% 1206
C547	9965 000 42228	100nF 16V X7R 0603	C733	9965 000 42260	10nF 50V X7R 0603	C850	9965 000 42228	100nF 16V X7R 0603
C548	9965 000 42228	100nF 16V X7R 0603	C734	9965 000 42260	10nF 50V X7R 0603	C851	9965 000 42400	1µF 10V Y5V 20% 0603
C549	9965 000 42228	100nF 16V X7R 0603	C735	9965 000 42231	330pF 50V NPO 0603	CN102	9965 100 03429	Connector
C550	9965 000 42228	100nF 16V X7R 0603	C736	9965 000 42231	330pF 50V NPO 0603	CN103	9965 100 04038	DC Power Jack 2.5mm
C551	9965 000 42228	100nF 16V X7R 0603	C737	9965 000 42692	5pF -10% 50V	CN104	9965 000 43342	Connector 2p m
C552	9965 000 42228	100nF 16V X7R 0603	C737	9965 100 03700	5pF 50V	CN602	9965 000 45058	RCA Jack g/b/r bl/w/r
C553	9965 000 42228	100nF 16V X7R 0603	C738	9965 000 42260	10nF 50V X7R 0603	CN602	9965 100 03701	Jack 2*3 g/b/r-bl/w/r
C554	9965 000 42228	100nF 16V X7R 0603	C739	9965 000 42231	330pF 50V NPO 0603	CN602	9965 100 03702	Jack 2*3 g/b/r-bl/w/r
C555	9965 100 03699	220µF 25V	C740	9965 000 42231	330pF 50V NPO 0603	CN602	9965 100 05114	RCA Jack 2*3 g/b/r-bl/w/r
C555	9965 100 05107	2200µF 25V	C741	9965 000 42692	5pF -10% 50V	CN651	9965 000 45310	Connector FF 0.5mm
C556	9965 000 42233	10µF 20% 10V 1206	C741	9965 100 03700	5pF 50V	CN651	9965 100 06905	Connector 16p
C557	9965 000 43988	4.7µF 10% 10V	C742	9965 000 42692	5pF -10% 50V	CN652	9965 000 43923	RCA Jack Wh/Ye/Rd
C557	9965 100 03698	4.7µF +/-10% 10V	C742	9965 100 03700	5pF 50V	CN652	9965 000 43924	RCA Jack Wh/Ye/Rd
C558	9965 000 42228	100nF 16V X7R 0603	C760	9965 000 42228	100nF 16V X7R 0603	CN653	9965 000 43926	Phone Jack 3.5MM 3p
C559	9965 000 42233	10µF 20% 10V 1206	C761	9965 000 42403	10µF 25V 20% 1210	CN701	9965 000 44002	HDMI Header 19p
C560	9965 000 43988	4.7µF 10% 10V	C761	9965 000 45205	10µF 10V 0805	CN701	9965 100 03703	HDMI header
C560	9965 100 03698	4.7µF +/-10% 10V	C762	9965 000 42403	10µF 25V 20% 1210	CN701	9965 100 05953	HDMI Header 19p
C561	9965 000 42228	100nF 16V X7R 0603	C762	9965 000 45205	10µF 10V 0805	CN726	9965 000 42206	D-SUB Conn 15pin
C562	9965 000 42228	100nF 16V X7R 0603	C763	9965 000 42228	100nF 16V X7R 0603	CN726	9965 000 43928	D-SUB Conn 15p f
C563	9965 000 42403	10µF 25V 20% 1210	C764	9965 000 42228	100nF 16V X7R 0603	CN726	9965 100 03704	Sub-D 15p
C563	9965 000 45205	10µF 10V 0805	C765	9965 000 42228	100nF 16V X7R 0603	CN760	9965 100 04037	Jack 3.5mm 7p Bk
C564	9965 000 42228	100nF 16V X7R 0603	C766	9965 000 42228	100nF 16V X7R 0603	CN760	9965 100 05113	Jack 3.5mm 7p Bk
C565	9965 000 42228	100nF 16V X7R 0603	C767	9965 000 42403	10µF 25V 20% 1210			
C566	9965 000 42228	100nF 16V X7R 0603	C767	9965 000 45205	10µF 10V 0805			
C567	9965 000 42228	100nF 16V X7R 0603	C768	9965 000 42403	10µF 25V 20% 1210			
C568	9965 000 42228	100nF 16V X7R 0603	C768	9965 000 45205	10µF 10V 0805			
C569	9965 000 42228	100nF 16V X7R 0603	C769	9965 000 42403	10µF 25V 20% 1210			
C570	9965 000 42228	100nF 16V X7R 0603	C770	9965 000 42403	10µF 25V 20% 1210			
C571	9965 000 42228	100nF 16V X7R 0603	C771	9965 000 42403	10µF 25V 20% 1210			
C572	9965 000 42228	100nF 16V X7R 0603	C771	9965 000 45205	10µF 10V 0805			
C573	9965 000 42228	100nF 16V X7R 0603	C772	9965 000 42403	10µF 25V 20% 1210			
C574	9965 000 42228	100nF 16V X7R 0603	C772	9965 000 45205	10µF 10V 0805			
C575	9965 000 42228	100nF 16V X7R 0603	C773	9965 000 42403	10µF 25V 20% 1210			
C576	9965 000 42228	100nF 16V X7R 0603	C773	9965 000 45205	10µF 10V 0805			
C577	9965 000 42228	100nF 16V X7R 0603	C774	9965 000 42403	10µF 25V 20% 1210			
C578	9965 000 42228	100nF 16V X7R 0603	C774	9965 000 45205	10µF 10V 0805			
C579	9965 000 42228	100nF 16V X7R 0603	C775	9965 000 42403	10µF 25V 20% 1210			
C580	9965 000 42228	100nF 16V X7R 0603	C775	9965 000 45205	10µF 10V 0805			
C581	9965 000 42228	100nF 16V X7R 0603	C776	9965 000 42403	10µF 25V 20% 1210			
C601	9965 000 42260	10nF 50V X7R 0603	C776	9965 000 45205	10µF 10V 0805			
C603	9965 000 42231	330pF 50V NPO 0603	C777	9965 000 42403	10µF 25V 20% 1210			
C604	9965 000 42231	330pF 50V NPO 0603	C777	9965 000 45205	10µF 10V 0805			
C606	9965 000 42231	330pF 50V NPO 0603	C778	9965 000 42228	100nF 16V X7R 0603			
C607	9965 000 42331	330pF 50V NPO 0603	C779	9965 000 42403	10µF 25V 20% 1210			
C608	9965 000 43977	1nF 5% 25V 0603	C779	9965 000 45205	10µF 10V 0805			
C609	9965 000 42260	10nF 50V X7R 0603	C780	9965 000 42403	10µF 25V 20% 1210			
C610	9965 000 42678	15pF -5% 50V 0603	C780	9965 000 45205	10µF 10V 0805			
C611	9965 000 42231	330pF 50V NPO 0603	C781	9965 000 42403	10µF 25V 20% 1210			
C612	9965 000 42231	330pF 50V NPO 0603	C781	9965 000 45205	10µF 10V 0805			
C613	9965 000 42260	10nF 50V X7R 0603	C782	9965 000 42228	100nF 16V X7R 0603			
C614	9965 000 42678	15pF -5% 50V 0603	C783	9965 000 42682	220pF -10% 50V			
C615	9965 000 42260	10nF 50V X7R 0603	C784	9965 000 42403	10µF 25V 20% 1210			
C616	9965 000 42260	10nF 50V X7R 0603	C784	9965 000 45205	10µF 10V 0805			
C617	9965 000 42231	330pF 50V NPO 0603	C789	9965 000 43992	220µF			
C618	9965 000 42231	330pF 50V NPO 0603	C790	9965 000 43992	220µF			
C619	9965 000 42678	15pF -5% 50V 0603	C801	9965 000 43980	100nF 20% 25V 0603			
C620	9965 000 42260	10nF 50V X7R 0603	C802	9965 000 43916	470µF 20% 25V			
C621	9965 000 43983	47nF 20 50V	C803	9965 000 43916	470µF 20% 25V			
C625	9965 000 43983	47nF 20 50V	C804	9965 000 43980	100nF 20% 25V 0603			
C629	9965 000 43983	47nF 20 50V	C805	9965 000 43980	100nF 20% 25V 0603			
C650	9965 000 42228	100nF 16V X7R 0603	C806	9965 000 43989	470nF 20% 50V			
C651	9965 000 43977	1nF 5% 25V 0603	C806	9965 000 45309	680nF 20% 50V 1206			
C652	9965 000 42678	15pF -5% 50V 0603	C806	9965 100 04234	680nF 50V 1206			
C655	9965 000 42678	15pF -5% 50V 0603	C807	9965 000 43980	100nF 20% 25V 0603			
C656	9965 000 42678	15pF -5% 50V 0603	C808	9965 000 42259	100pF 50V 0603			
C657	9965 000 42260	10nF 50V X7R 0603	C809	9965 000 42259	100pF 50V 0603			
C658	9965 000 42260	10nF 50V X7R 0603	C811	9965 000 43980	100nF 20% 25V 0603			
C659	9965 000 42260	10nF 50V X7R 0603	C812	9965 000 43980	100nF 20% 25V 0603			
C662	9965 000 42260	10nF 50V X7R 0603	C813	9965 000 44245	220nF 10% 25V 0805			
C663	9965 000 42260	10nF 50V X7R 0603	C814	9965 000 44245	220nF 10% 25V 0805			
C664	9965 000 42260	10nF 50V X7R 0603	C815	9965 000 42400	1µF 10V Y5V 20% 0603			
C665	9965 000 43983	47nF 20 50V	C816	9965 000 42263	0.47µF 5% 10V 0603			
C666	9965 000 42690	47pF 50V NPO 5% 0603	C817	9965 000 43977	1nF 5% 25V 0603			
C667	9965 000 43983	47nF 20 50V	C818	9965 000 43980	100nF 20% 25V 0603			
C668	9965 000 42690	47pF 50V NPO 5% 0603	C819	9965 000 43980	100nF 20% 25V 0603			
C669	9965 000 42231	330pF 50V NPO 0603	C820	9965 000 42263	0.47µF 5% 10V 0603			
C670	9965 000 42259	100pF 50V 0603	C821	9965 000 42263	0.47µF 5% 10V 0603			
C671	9965 000 43994	10µF 16V	C822	9965 000 42263	0.47µF 5% 10V 0603			
C672	9965 000 42262	100nF 50V Y5V 0603	C823	9965 000 42263	0.47µF 5% 10V 0603			
C673	9965 000 42262	100nF 50V Y5V 0603	C824	9965 000 43977	1nF 5% 25V 0603			
C674	9965 000 42262	100nF 50V Y5V 0603	C825	9965 000 42400	1µF 10V Y5V 20% 0603			

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R101	9965 000 42284	0Ω 1/10W
R102	9965 000 42220	22kΩ 5% 1/10W
R103	9965 000 42220	22kΩ 5% 1/10W
R104	9965 000 42213	100Ω 5% 1/10W
R105	9965 000 42214	10kΩ 5% 1/10W
R106	9965 000 42213	100Ω 5% 1/10W
R108	9965 000 43955	1kΩ 1% 1/10W
R109	9965 000 44324	22kΩ 1% 0.1W
R109	9965 100 02777	22kΩ 1% 0.1W
R110	9965 000 44832	5.6kΩ 1% 1/10W
R110	9965 100 02778	15kΩ 1% 0.1W

R250	9965 000 44050	1.1kΩ 5% 1/10W	R518	9965 000 43336	75Ω 5% 1/10W	R750	9965 000 42225	4.7kΩ 5% 1/10W
R251	9965 000 42225	4.7kΩ 5% 1/10W	R519	9965 000 43336	75Ω 5% 1/10W	R751	9965 000 42214	10kΩ 5% 1/10W
R252	9965 000 42225	4.7kΩ 5% 1/10W	R520	9965 000 43336	75Ω 5% 1/10W	R753	9965 000 42222	33Ω 5% 1/10W
R253	9965 000 42225	4.7kΩ 5% 1/10W	R521	9965 000 43336	75Ω 5% 1/10W	R754	9965 000 42213	100Ω 5% 1/10W
R254	9965 000 42222	33Ω 5% 1/10W	R522	9965 000 43336	75Ω 5% 1/10W	R760	9965 000 42214	10kΩ 5% 1/10W
R255	9965 000 42222	33Ω 5% 1/10W	R523	9965 000 43336	75Ω 5% 1/10W	R761	9965 000 42277	47kΩ 5% 1/10W
R256	9965 000 42222	33Ω 5% 1/10W	R524	9965 000 43336	75Ω 5% 1/10W	R762	9965 000 43972	8.2kΩ 5% 1/10W
R257	9965 000 42222	33Ω 5% 1/10W	R525	9965 000 43336	75Ω 5% 1/10W	R763	9965 000 43972	8.2kΩ 5% 1/10W
R258	9965 000 42222	33Ω 5% 1/10W	R602	9965 000 40053	1KΩ 1/10W 5%	R764	9965 000 42214	10kΩ 5% 1/10W
R259	9965 000 42222	33Ω 5% 1/10W	R603	9965 000 42221	27kΩ 5% 1/10W	R765	9965 000 42225	4.7kΩ 5% 1/10W
R260	9965 000 42222	33Ω 5% 1/10W	R605	9965 000 40053	1KΩ 1/10W 5%	R766	9965 000 42225	4.7kΩ 5% 1/10W
R261	9965 000 42222	33Ω 5% 1/10W	R606	9965 000 42221	27kΩ 5% 1/10W	R767	9965 000 42214	10kΩ 5% 1/10W
R262	9965 000 42221	1MΩ 5% 1/10W	R607	9965 000 42226	68Ω 5% 1/10W	R768	9965 000 42214	10kΩ 5% 1/10W
R263	9965 000 42222	33Ω 5% 1/10W	R608	9965 000 42226	68Ω 5% 1/10W	R769	9965 000 42214	10kΩ 5% 1/10W
R264	9965 000 42222	33Ω 5% 1/10W	R609	9965 000 43336	75Ω 5% 1/10W	R770	9965 000 42214	10kΩ 5% 1/10W
R265	9965 000 42222	33Ω 5% 1/10W	R610	9965 000 40053	1KΩ 1/10W 5%	R771	9965 000 42214	10kΩ 5% 1/10W
R266	9965 000 42222	33Ω 5% 1/10W	R611	9965 000 42213	100Ω 5% 1/10W	R772	9965 000 42214	10kΩ 5% 1/10W
R301	9965 000 42212	0Ω 5% 1/10W	R612	9965 000 42221	27kΩ 5% 1/10W	R773	9965 000 42222	33Ω 5% 1/10W
R302	9965 000 42212	0Ω 5% 1/10W	R613	9965 000 42226	68Ω 5% 1/10W	R774	9965 000 42222	33Ω 5% 1/10W
R303	9965 000 43336	75Ω 5% 1/10W	R614	9965 000 43336	75Ω 5% 1/10W	R775	9965 000 42222	33Ω 5% 1/10W
R304	9965 000 43336	75Ω 5% 1/10W	R615	9965 000 42213	100Ω 5% 1/10W	R776	9965 000 42222	33Ω 5% 1/10W
R305	9965 000 43336	75Ω 5% 1/10W	R616	9965 000 40053	1KΩ 1/10W 5%	R777	9965 000 42222	33Ω 5% 1/10W
R350	9965 000 42212	0Ω 5% 1/10W	R617	9965 000 42226	68Ω 5% 1/10W	R778	9965 000 42222	33Ω 5% 1/10W
R351	9965 000 42214	10kΩ 5% 1/10W	R618	9965 000 42221	27kΩ 5% 1/10W	R779	9965 000 42222	33Ω 5% 1/10W
R352	9965 000 42214	10kΩ 5% 1/10W	R619	9965 000 43336	75Ω 5% 1/10W	R780	9965 000 42277	47kΩ 5% 1/10W
R353	9965 000 42214	10kΩ 5% 1/10W	R620	9965 000 42213	100Ω 5% 1/10W	R781	9965 000 42222	33Ω 5% 1/10W
R354	9965 000 42214	10kΩ 5% 1/10W	R621	9965 000 42213	100Ω 5% 1/10W	R782	9965 000 42277	47kΩ 5% 1/10W
R355	9965 000 42214	10kΩ 5% 1/10W	R625	9965 000 42225	4.7kΩ 5% 1/10W	R785	9965 000 42225	4.7kΩ 5% 1/10W
R356	9965 000 42214	10kΩ 5% 1/10W	R626	9965 000 42213	100Ω 5% 1/10W	R786	9965 000 42277	47kΩ 5% 1/10W
R357	9965 000 42214	10kΩ 5% 1/10W	R630	9965 000 42213	100Ω 5% 1/10W	R787	9965 000 42277	47kΩ 5% 1/10W
R358	9965 000 42214	10kΩ 5% 1/10W	R650	9965 000 42213	100Ω 5% 1/10W	R788	9965 000 42212	0Ω 5% 1/10W
R362	9965 000 42213	100Ω 5% 1/10W	R651	9965 000 42212	0Ω 5% 1/10W	R801	9965 000 42215	100kΩ 5% 1/10W
R363	9965 000 42222	33Ω 5% 1/10W	R652	9965 000 40053	1KΩ 1/10W 5%	R801	9965 000 42397	15kΩ 5% 1/10W
R364	9965 000 42218	220Ω 5% 1/10W	R652	9965 000 42212	0Ω 5% 1/10W	R802	9965 000 42662	330Ω 5% 1/10W
R365	9965 000 42222	33Ω 5% 1/10W	R654	9965 000 43336	75Ω 5% 1/10W	R803	9965 000 40053	1KΩ 1/10W 5%
R366	9965 000 42277	47kΩ 5% 1/10W	R655	9965 000 43336	75Ω 5% 1/10W	R803	9965 000 43970	7.5kΩ 5% 1/10W
R367	9965 000 42214	10kΩ 5% 1/10W	R656	9965 000 43336	75Ω 5% 1/10W	R804	9965 000 42395	10kΩ 5% 1/10W
R368	9965 000 42214	10kΩ 5% 1/10W	R657	9965 000 42226	68Ω 5% 1/10W	R804	9965 000 43490	5.6kΩ 5% 0.1W
R369	9965 000 43972	8.2kΩ 5% 1/10W	R658	9965 000 42226	68Ω 5% 1/10W	R805	9965 000 42664	47Ω 5% 1/10W
R370	9965 000 42213	100Ω 5% 1/10W	R659	9965 000 40053	1KΩ 1/10W 5%	R806	9965 000 42215	100kΩ 5% 1/10W
R371	9965 000 42214	10kΩ 5% 1/10W	R659	9965 000 42212	0Ω 5% 1/10W	R807	9965 000 40053	1KΩ 1/10W 5%
R372	9965 000 42213	100Ω 5% 1/10W	R660	9965 000 42226	68Ω 5% 1/10W	R807	9965 000 43970	7.5kΩ 5% 1/10W
R373	9965 000 42666	51Ω 5% 1/10W	R662	9965 000 42226	68Ω 5% 1/10W	R808	9965 000 42397	15kΩ 5% 1/10W
R374	9965 000 42225	4.7kΩ 5% 1/10W	R663	9965 000 42213	100Ω 5% 1/10W	R809	9965 000 42215	100kΩ 5% 1/10W
R375	9965 000 42225	4.7kΩ 5% 1/10W	R664	9965 000 42213	100Ω 5% 1/10W	R809	9965 000 42397	15kΩ 5% 1/10W
R377	9965 000 42214	10kΩ 5% 1/10W	R665	9965 000 43336	75Ω 5% 1/10W	R810	9965 000 42395	10kΩ 5% 1/10W
R378	9965 000 42218	220Ω 5% 1/10W	R666	9965 000 42213	100Ω 5% 1/10W	R810	9965 000 43490	5.6kΩ 5% 0.1W
R380	9965 000 42664	47Ω 5% 1/10W	R667	9965 000 43336	75Ω 5% 1/10W	R811	9965 000 42658	120kΩ -5% 0.1W
R381	9965 000 42664	47Ω 5% 1/10W	R668	9965 000 42212	0Ω 5% 1/10W	R850	9965 000 42214	10kΩ 5% 1/10W
R382	9965 000 42664	47Ω 5% 1/10W	R670	9965 000 40053	1KΩ 1/10W 5%	R851	9965 000 40053	1KΩ 1/10W 5%
R383	9965 000 42225	4.7kΩ 5% 1/10W	R671	9965 000 42213	100Ω 5% 1/10W	R853	9965 000 42225	4.7kΩ 5% 1/10W
R385	9965 000 42213	100Ω 5% 1/10W	R672	9965 000 40053	1KΩ 1/10W 5%	R855	9965 000 42214	10kΩ 5% 1/10W
R386	9965 000 42213	100Ω 5% 1/10W	R673	9965 000 40053	1KΩ 1/10W 5%	R856	9965 000 42214	10kΩ 5% 1/10W
R387	9965 000 42213	100Ω 5% 1/10W	R674	9965 100 02779	4.7kΩ 1% 0.1W	R857	9965 000 42225	4.7kΩ 5% 1/10W
R388	9965 000 42219	2.2kΩ 5% 1/10W	R675	9965 100 02779	4.7kΩ 1% 0.1W	R858	9965 000 42212	0Ω 5% 1/10W
R390	9965 000 42225	4.7kΩ 5% 1/10W	R676	9965 000 42212	0Ω 5% 1/10W	R859	9965 000 42212	0Ω 5% 1/10W
R391	9965 000 42225	4.7kΩ 5% 1/10W	R677	9965 000 43336	75Ω 5% 1/10W	R860	9965 000 42212	0Ω 5% 1/10W
R392	9965 000 42225	4.7kΩ 5% 1/10W	R678	9965 000 42213	100Ω 5% 1/10W	R861	9965 000 42212	0Ω 5% 1/10W
R394	9965 000 42225	4.7kΩ 5% 1/10W	R679	9965 000 42213	100Ω 5% 1/10W	R862	9965 000 42212	0Ω 5% 1/10W
R395	9965 000 43961	3.9kΩ 5% 1/10W	R680	9965 000 42213	100Ω 5% 1/10W	R863	9965 000 42212	0Ω 5% 1/10W
R396	9965 000 42225	4.7kΩ 5% 1/10W	R681	9965 000 42212	0Ω 5% 1/10W	R864	9965 000 42212	0Ω 5% 1/10W
R397	9965 000 42225	4.7kΩ 5% 1/10W	R701	9965 000 42213	100Ω 5% 1/10W	R865	9965 000 42212	0Ω 5% 1/10W
R398	9965 000 42225	4.7kΩ 5% 1/10W	R703	9965 000 42213	100Ω 5% 1/10W	R866	9965 000 42212	0Ω 5% 1/10W
R399	9965 000 42212	0Ω 5% 1/10W	R704	9965 000 40053	1KΩ 1/10W 5%	R867	9965 000 42212	0Ω 5% 1/10W
R406	9965 000 42217	22Ω 5% 1/10W	R705	9965 000 42225	4.7kΩ 5% 1/10W	R868	9965 000 42212	0Ω 5% 1/10W
R407	9965 000 42225	4.7kΩ 5% 1/10W	R706	9965 000 40053	1KΩ 1/10W 5%	R871	9965 000 42212	0Ω 5% 1/10W
R408	9965 000 42213	100Ω 5% 1/10W	R707	9965 000 42222	33Ω 5% 1/10W	R872	9965 000 42212	0Ω 5% 1/10W
R409	9965 000 42213	100Ω 5% 1/10W	R708	9965 000 42215	100kΩ 5% 1/10W	RP501	9965 000 43951	22Ω 5%
R410	9965 000 42212	0Ω 5% 1/10W	R709	9965 100 02785	20kΩ 5% 0.1W	RP502	9965 000 43951	22Ω 5%
R411	9965 000 40053	1KΩ 1/10W 5%	R711	9965 100 02785	20kΩ 5% 0.1W	RP503	9965 000 43952	47Ω 5% 1/16W
R411	9965 000 42225	4.7kΩ 5% 1/10W	R725	9965 000 42212	0Ω 5% 1/10W	RP504	9965 000 43952	47Ω 5% 1/16W
R412	9965 000 40053	1KΩ 1/10W 5%	R726	9965 000 42226	68Ω 5% 1/10W	RP505	9965 000 43951	22Ω 5%
R412	9965 000 42225	4.7kΩ 5% 1/10W	R727	9965 000 42213	100Ω 5% 1/10W	RP506	9965 000 43953	75Ω 5% 1/16W
R413	9965 000 42224	470Ω 5% 1/10W	R728	9965 000 42212	0Ω 5% 1/10W	RP507	9965 000 43952	47Ω 5% 1/16W
R413	9965 100 02784	470Ω 1% 0.1W	R729	9965 000 42226	68Ω 5% 1/10W	RP508	9965 000 43951	22Ω 5%
R413	9965 100 04230	470Ω 1% 0.1W	R730	9965 000 43336	75Ω 5% 1/10W	RP509	9965 000 43952	47Ω 5% 1/16W
R414	9965 000 42220	22kΩ 5% 1/10W	R731	9965 000 42213	100Ω 5% 1/10W	RP510	9965 000 43951	22Ω 5%
R414	9965 100 02777	22kΩ 1% 0.1W	R732	9965 000 42226	68Ω 5% 1/10W	RP511	9965 000 43952	47Ω 5% 1/16W
R501	9965 000 42213	100Ω 5% 1/10W	R733	9965 000 43336	75Ω 5% 1/10W	RP512	9965 000 43952	47Ω 5% 1/16W
R502	9965 000 42217	22Ω 5% 1/10W	R734	9965 000 42213	100Ω 5% 1/10W	RP513	9965 000 43953	75Ω 5% 1/16W
R504	9965 000 42217	22Ω 5% 1/10W	R735	9965 000 42212	0Ω 5% 1/10W	RP514	9965 000 43952	47Ω 5% 1/16W
R505	9965 000 42217	22Ω 5% 1/10W	R736	9965 000 42226	68Ω 5% 1/10W	RP515	9965 000 43952	47Ω 5% 1/16W
R506	9965 000 42217	22Ω 5% 1/10W	R737	9965 000 40053	1KΩ 1/10W 5%	RP516	9965 000 43953	75Ω 5% 1/16W
R507	9965 000 42217	22Ω 5% 1/10W	R738	9965 000 42221	27kΩ 5% 1/10W	RP517	9965 000 43953	75Ω 5% 1/16W
R508	9965 000 42213	100Ω 5% 1/10W	R739	9965 000 43336	75Ω 5% 1/10W	RP518	9965 000 43953	75Ω 5% 1/16W
R509	9965 000 42225	4.7kΩ 5% 1/10W	R740	9965 000 42213	100Ω 5% 1/10W	RP519	9965 000 43953	75Ω 5% 1/16W
R510	9965 000 42664	47Ω 5% 1/10W	R741	9965 000 40053	1KΩ 1/10W 5%	RP520	9965 000 43953	75Ω 5% 1/16W
R511	9965 000 42664	47Ω 5% 1/10W	R742	9965 000 42221	27kΩ 5% 1/10W	RP521	9965 000 43953	75Ω 5% 1/16W
R512	9965 000 42664	47Ω 5% 1/10W	R743	9965 000 43967				

11. Revision List

Manual xxxx xxx xxxx.0

- First release.

Manual xxxx xxx xxxx.4

- 19MF337B/27 added.
- 19MD357B/27 added.
- 19PFL5402D/27 added.
- 19PFL5422D/27 added.
- 19PFL5622D/37 added.

Manual xxxx xxx xxxx.5

- **Chapter 10:** Spare parts list added.

Service
Service
Service

Part 2:

26MF337B/27
26MD357B/37
32MF337B/27
32MD357B/37
37MF337B/37
37PFL5332D/37
42MF337B/37



H_16643_001.eps
040507

Service Manual

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1. Technical Specifications,Connections,and Chassis Overview

Index of this chapter:

- 1.1 Technical Specifications
- 1.2 Connections
- 1.3 Chassis Overview

Notes:

Figures below can deviate slightly from the actual situation,
due to the different set executions.
Specifications are indicative (subject to change)

1.1 Technical Specifications

1.1.1 Technical Specifications

Panel	:LPL
Active Area	:697.685mm (H) X 392.256mm (V) (31.51" diagonal)
Outline Dimension	:760.0mm (H) X 450.0mm (V) X 48.0mm (D)
Pixel Pitch	:0.17025mm(H) X 0.51075mm(V)
Pixel Format	:1366 X 768 (WXGA), RGB strip arrangement
Color Depth	:8-bit, 16.7M colors
Luminance	:500 cd/m ² (Typ)
Backlight	:18 EEFL
Response Time	:10msec.
Viewing Angle	:170/170 (L/R,U/D) (CR > 10)
Contrast Ratio	:800:1
Tuning system	:PLL
CCFL MTBF	:50,000 hrs (min.)
Supoorted video fomats	:720 x 480 @60i 720 x 240 @60p 640 x 480 @60p 720 x 480 @60p 800 x 600 @60p 1280 x 720 @60p 1024 x 768 @60p 1920 x 1080 @60i 1920 x 1080 @30P 1920 x 1080 @60P

1.1.2 Sound

Sound systems	: Mono / Stereo / Virtual Surround
Maximum power	: 2 x 5W

1.1.3 Miscellaneous

Power supply	
AC-input	: 90V ~ 264VAC, 50/60±3Hz
Normal Operation Power Consumption	: < 150W (LC320W01-SL06)
Standby power	: < 1W (110V/60Hz only)
Power cord length	: 1.8M
Power cord type	: 3 lead with earth plug , plugable (US type)
Power indicator	: LED (On: Green, Standby: No light, VGA mode Standby: Red)
Ambient conditions	
Temperature	: 0 to40°C
Humidity	: 10 to 90% (non --condensing)
Power consumption	
Normal Operation	: < 150W (LC320W01-SL06)
Standby power	: < 1W (110V/60Hz only)

AV IN3: Video3 (CVBS, RCA jack) and S-Video share with same audio R/L (RCA jack).

AV IN1: YPbPr component video1 (RCA jack) with audio R/L (RCA jack).

AV IN2: YPbPr component video2 (RCA jack) with audio R/L (RCA jack).

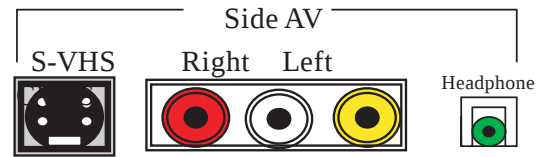
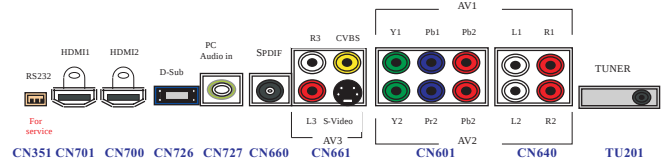
Side AV IN: Side Video (CVBS, RCA jack), Side S-Video and HDMI (DVI) share with same audio R/L (RCA jack).

Headphone OUT : Audio R/L out (mini-jack)

SPDIF OUT : RCA jack

PC VGA: D-SUB 15 pins

PC Audio: Mini-jack



1.2.2. Input signal

TV Signal type:

RF Signal : Aerial input / 10mV(80dBuV)

Video signal : Video(RCA CVBS input) / 1Vpp
(300mV-sync, 700mV-video.)

S video input / 1VppY-signal, 300mVpp C-signal

COMP Video (YPbPr input)/ 1Vpp Y signal,
350mVpp Pb, Pr signal

HDMI : Digital interface with 4 channels TMDs signal

Audio signal : Audio (1) R/L for AV IN1 (Comp-video1).

Level: - Nominal : 0.5 V rms.
- Maximum : 1.5 V rms.
- Impedance > 10 k ohm.

Audio (2) R/L for AV IN2 (Comp-video2).

Level: - Nominal : 0.5 V rms.
- Maximum : 1.5 V rms.
- Impedance > 10 k ohm.

Audio (3) R/L for AV IN3 (Video3 and S-video).

Level: - Nominal : 0.5 V rms.
- Maximum : 1.5 V rms.
- Impedance > 10 k ohm.

Side Audio R/L for Side AV IN (Side Video and S-video).

Level: - Nominal : 0.5 V rms.
- Maximum : 1.5 V rms.
- Impedance > 10 k ohm

PC Signal type:

Analog Video : 0.7 Vp-p linear, positive polarity

Separate Sync. : TTL level, separate, positive or negative polarity

Audio signal : Mini-jack audio input,
Level: - Nominal : 0.5 V rms.
- Maximum : 1.5 V rms.
- Impedance > 10 k ohm.

Signal source : Pattern generator format as attachment.

(table 1 to 11)

Reference generator: CHROMA 2200 or 2250

Headphone output :

Audio: R/L output -10mW at 32ohm.

3.5mm stereo jack with switch

Impedance is between 8 ohm and 600 ohm

SPDIF output:

Level 0.5V ~ 1V Square Wave

1.2 Connections

1.2.1 Signal connector

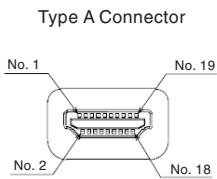
FL3-26W /32W /37W /42W /47W I/O function is located
on TV module, including

Tuner: NAFTA.

HDMI IN1: HDMI input (TV digital interface support HDCP)
with digital audio or with AV IN3 audio R/L.

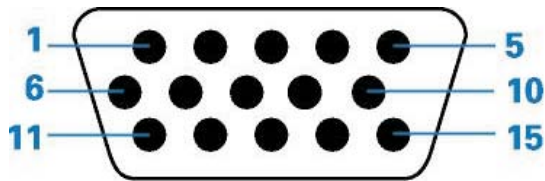
HDMI IN2: HDMI input (TV digital interface support HDCP)
with digital audio or with AV IN3 audio R/L.

1.2.3 HDMI Pin assignment (Nafta only)



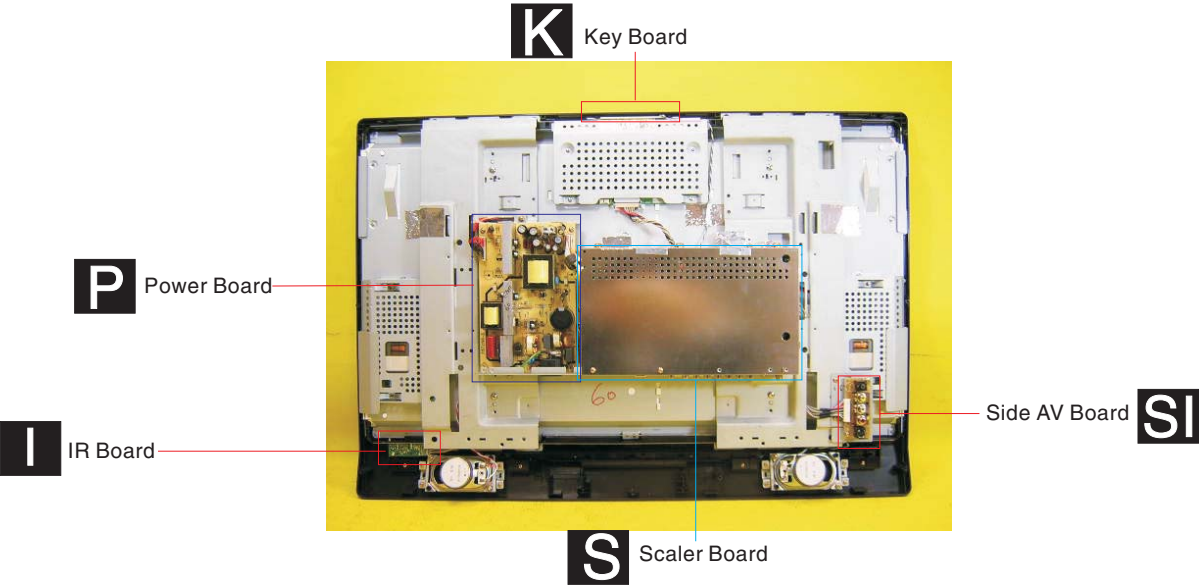
PIN No.	SIGNAL
1	TMDS Data2+
2	TMDS Data2 shield
3	TDMS Data2-
4	TMDS Data1+
5	TMDS Data1 shield
6	TMDS Data1-
7	TMDS Data0+
8	TMDS Data0 shield
9	TMDS Data0-
10	TMDS Clock+
11	TMDS Clock Shield
12	TMDS Clock-
13	CEC
14	Reserved (N.C. on device)
15	SCL
16	SDA
17	DDC/CEC Ground
18	+5V Power
19	Hot Plug Detect

1.2.4 VGA Pin assignment



PIN No.	SIGNAL
1	Red
2	Green
3	Blue
4	GND
5	Self test
6	Red GND
7	Green GND
8	Blue GND
9	+5V (Supply from PC)
10	Sync GND
11	GND
12	Bi-directional data(SDA)
13	H-sync
14	V-sync
15	Data clock(SCL)

1.3 Chassis Overview



2. Safety Instructions, Warnings, and Notes

Index of this chapter:

- 2.1 Safety Instructions
- 2.2 Warnings
- 2.3 Notes

2.1 Safety Instructions

Safety regulations require the following **during** a repair:

- Connect the set to the Mains/AC Power via an isolation transformer (> 800 VA).
- Replace safety components, indicated by the symbol , only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that **after** a repair, the set must be returned in its original condition. Pay in particular attention to the following points:

- Route the wire trees correctly and fix them with the mounted cable clamps.
- Check the insulation of the Mains/AC Power lead for external damage.
- Check the strain relief of the Mains/AC Power cord for proper function.
- Check the electrical DC resistance between the Mains/AC Power plug and the secondary side (only for sets that have a Mains/AC Power isolated power supply):
 1. Unplug the Mains/AC Power cord and connect a wire between the two pins of the Mains/AC Power plug.
 2. Set the Mains/AC Power switch to the "ON" position (keep the Mains/AC Power cord unplugged!).
 3. Measure the resistance value between the pins of the Mains/AC Power plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 Mohm and 12 Mohm.
 4. Switch "OFF" the set, and remove the wire between the two pins of the Mains/AC Power plug.
- Check the cabinet for defects, to prevent touching of any inner parts by the customer.

2.2 Warnings

- All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD ) . Careless handling during repair can reduce life drastically. Make sure that, during repair, you are connected with the same potential as the mass of the set by a wristband with resistance. Keep components and tools also at this same potential. Available ESD protection equipment:
 - Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
 - Wristband tester 4822 344 13999.
- Be careful during measurements in the high voltage section.
- Never replace modules or other components while the unit is switched "ON".
- When you align the set, use plastic rather than metal tools. This will prevent any short circuits and the danger of a circuit becoming unstable.

2.3 Notes

2.3.1 General

- Measure the voltages and waveforms with regard to the chassis (= tuner) ground () , or hot ground () , depending on the tested area of circuitry. The voltages and waveforms shown in the diagrams are indicative. Measure them in the

Service Default Mode (see chapter 5) with a colour bar signal and stereo sound (L: 3 kHz, R: 1 kHz unless stated otherwise) and picture carrier at 475.25 MHz for PAL, or 61.25 MHz for NTSC (channel 3).

- Where necessary, measure the waveforms and voltages with () and without () aerial signal. Measure the voltages in the power supply section both in normal operation () and in stand-by () . These values are indicated by means of the appropriate symbols.
- The semiconductors indicated in the circuit diagram and in the parts lists, are interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.
- Manufactured under license from Dolby Laboratories. "Dolby", "Pro Logic" and the "double-D symbol", are trademarks of Dolby Laboratories.

2.3.2 Schematic Notes

- All resistor values are in ohms, and the value multiplier is often used to indicate the decimal point location (e.g. 2K2 indicates 2.2 kohm).
- Resistor values with no multiplier may be indicated with either an "E" or an "R" (e.g. 220E or 220R indicates 220 ohm).
- All capacitor values are given in micro-farads ($\mu = \times 10^{-6}$), nano-farads ($n = \times 10^{-9}$), or pico-farads ($p = \times 10^{-12}$).
- Capacitor values may also use the value multiplier as the decimal point indication (e.g. 2p2 indicates 2.2 pF).
- An "asterisk" (*) indicates component usage varies. Refer to the diversity tables for the correct values.
- The correct component values are listed in the Spare Parts List. Therefore, always check this list when there is any doubt.

2.3.3 Lead-free Solder

Philips CE is producing lead-free sets (PBF) from 1.1.2005 onwards.

Identification: The bottom line of a type plate gives a 14-digit serial number. Digits 5 and 6 refer to the production year, digits 7 and 8 refer to production week (in example below it is 2006 week 17).



E_06532_024.eps
130606

Figure 2-1 Serial number example

Regardless of the special lead-free logo (which is not always indicated), one must treat all sets from this date onwards according to the rules as described below.

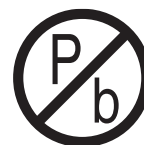


Figure 2-2 Lead-free logo

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free soldering tin Philips SAC305 with order code 0622 149 00106. If lead-free solder paste is required, please contact the manufacturer of your soldering equipment. In general, use of solder paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free soldering tin. The solder tool must be able:
 - To reach a solder-tip temperature of at least 400°C.
 - To stabilise the adjusted temperature at the solder-tip.
 - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature of around 360°C - 380°C is reached and stabilised at the solder joint. Heating time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C, otherwise wear-out of tips will increase drastically and flux-fluid will be destroyed. To avoid wear-out of tips, switch "off" unused equipment or reduce heat.
- Mix of lead-free soldering tin/parts with leaded soldering tin/parts is possible but PHILIPS recommends strongly to **avoid** mixed regimes. If this cannot be avoided, carefully clear the solder-joint from old tin and re-solder with new tin.
- Use only original spare-parts listed in the Service-Manuals. Not listed standard material (commodities) has to be purchased at external companies.
- For sets produced before 1.1.2005, containing leaded soldering tin and components, all needed spare parts will be available till the end of the service period. For the repair of such sets nothing changes.

In case of doubt whether the board is lead-free or not (or with mixed technologies), you can use the following method:

- Always use the highest temperature to solder, when using SAC305 (see also instructions below).
- De-solder thoroughly (clean solder joints to avoid mix of two alloys).

2.3.4 Alternative BOM identification

In September 2003, Philips CE introduced a change in the way the serial number (or production number, see Figure 2-1) is composed. From this date on, the **third digit** in the serial number (example: AG2B0335000001) indicates the number of

the alternative BOM (Bill of Materials used for producing the specific model of TV set). It is possible that the same TV model on the market is produced with e.g. two different types of displays, coming from two different O.E.M.s.

By looking at the third digit of the serial number, the service technician can see if there is more than one type of B.O.M. used in the production of the TV set he is working with. He can then consult the At Your Service Web site, where he can type in the Commercial Type Version Number of the TV set (e.g. 28PW9515/12), after which a screen will appear that gives information about the number of alternative B.O.M.s used. If the third digit of the serial number contains the number 1 (example: AG1B0335000001), then there is only one B.O.M. version of the TV set on the market. If the third digit is a 2 (example: AG2B0335000001), then there are two different B.O.M.s. Information about this is important for ordering the correct spare parts!

For the third digit, the numbers 1...9 and the characters A...Z can be used, so in total: 9 plus 26 = 35 different B.O.M.s can be indicated by the third digit of the serial number.

2.3.5 Board Level Repair (BLR) or Component Level Repair (CLR)

If a board is defective, consult your repair procedure to decide if the board has to be exchanged or if it should be repaired on component level.

If your repair procedure says the board should be exchanged completely, do not solder on the defective board. Otherwise, it cannot be returned to the O.E.M. supplier for back charging!

2.3.6 Practical Service Precautions

- **It makes sense to avoid exposure to electrical shock.** While some sources are expected to have a possible dangerous impact, others of quite high potential are of limited current and are sometimes held in less regard.
- **Always respect voltages.** While some may not be dangerous in themselves, they can cause unexpected reactions that are best avoided. Before reaching into a powered TV set, it is best to test the high voltage insulation. It is easy to do, and is a good service precaution.

3. Directions for Use

You can download this information from the following websites:

<http://www.philips.com/support>

<http://www.p4c.philips.com>

Magnavox/Philips Digital UI-TV/AV1/AV2/AV3/Side/HDMI				
OSD Layer 1	2	3	4	5
Picture	Smart Picture	Personal Rich Natural Soft Power Saver		
	Contrast	slider		
	Brightness	slider		
	Color	slider		
	Sharpness	slider		
	Color temperature	Normal Warm Cool		
	Tint	slider		
	Noise Reduction	slider		
	Dynamic Contrast	OFF Medium Maximum		
	Picture format	Automatic Super zoom 4:3 Movie expand 14:9 Movie expand 16:9 16:9 subtitle Wide screen		
Sound	Smart sound	Personal Speech Movies	EQUALIZER EQUALIZER EQUALIZER	
	Sound mode	Mono Stereo Virtual Surround		
	Alternate audio	Main SAP		
	AVL	Off On		
Features	Closed captions	Off On On during mute		
	Caption service	CC-1 CC-2 CC-3 CC-4 T-1 T-2 T-3 T-4		
	Digital caption service	CS-1 CS-2 CS-3 CS-4 CS-5 CS-6		

	Digital caption options	Reset to default	Reset to default	
		Size	Default Small Standard Large	
		Style	Default Monospaced serif Serif Monospaced sans serif Sans serif Casual Cursive Small caps	
		Text	Color	Default Black White Red Green Blue Yellow Magenta Cyan
			Opacity	Default Solid Transparent Translucent Flashing
		Background	Color	Default Black White Red Green Blue Yellow Magenta Cyan
			Opacity	Default Solid Transparent Translucent Flashing
		Preferred channels		
		Sleeptimer	slider	
Parental Control (*)	Channel lock			
	TV ratings lock			
	Movie ratings lock			
	Region ratings lock			
	Clear Regions lock			
	Change Pin			
Installation	Language	English Francais Espanol		
	Autoprogram	AUTO Antenna Cable	Start now (Analog first then Digital)	
	Source	TV AV1 AV2 AV3 HDMI 1 HDMI 2 Side DVD PC		

3. Directions for Use

	HDMI Audio (**)	Auto HDMI Digital		
	Clock	Enter Time(Hrs,Mins) AM/PM		
	Weak channel Installation	(Current software Version)		
	Current Software Info			
	Reset AV settings		Start now	
EXIT	EXIT			

Magnavox/Philips Digital UI-PC				
1	2	3	4	5
Picture	Contrast	slider		
	Brightness	slider		
	Color temp	Normal Warm Cool		
	Picture format	Full screen 4:3		
Sound	Smart sound	Personal Speech Movie	Equalizer Equalizer Equalizer	
	Virtual surround	On Off		
Installation	Language	English Francais Espanol		
	Source	TV AV1 AV2 AV3 HDMI 1 HDMI 2 Side DVD PC		
	Picture Adjustment	Auto adjust	Yes	Yes No
			Store ?	
		Manual adjust	Phase Clock Horizontal Vertical	
	Factory reset	No		
		Yes		
EXIT	Exit			

4. Mechanical Instructions

Index of this chapter:

4.1 Assy/Panel Removal

4.2 Set Re-assembly

4.1 Assy/Panel Removal

Note: Please put your machine on a soft material to avoid to scrape panel when you disassemble it.

Front View



Back View



Step 1. Remove Base

Unscrew four screws as Fig1



Fig 1

Step 2. Remove Back cover assy

Unscrew ten screws as fig 2



Fig 2

Step 3. Remove Vase plate and Bracket-base

Unscrew fourteen screws as fig 3

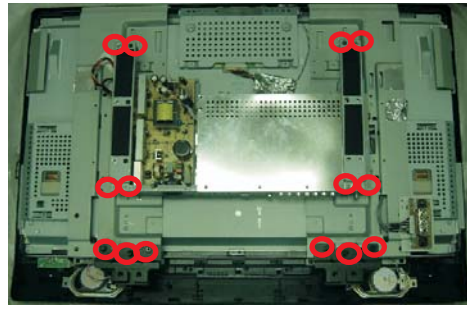


Fig 3

Step 4. Remove Shielding

Unscrew nine screws as fig 4 and unscrew nine screws as fig 5

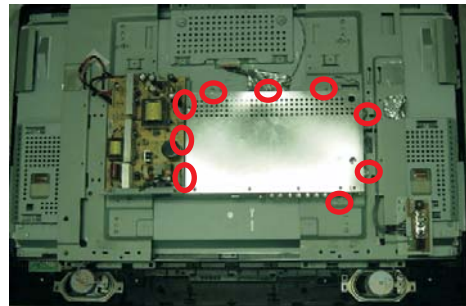


Fig 4



Fig 5

Step 5. Remove power board, scaler board, side AV board and IR board.

Unscrew seventeen screws and disconnect ten cables as fig 6

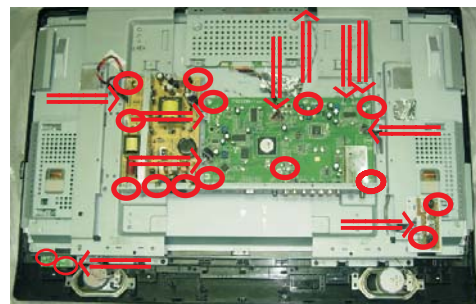


Fig 6

Step 6. Remove frame-PCB

Unscrew eight screws as fig 7

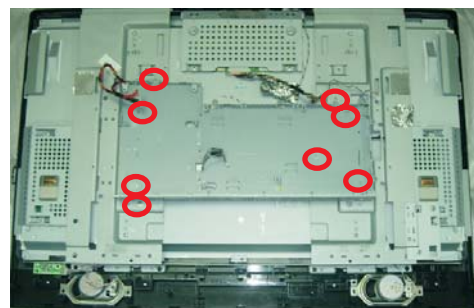


Fig 7

4. Mechanical Instructions

Step 7. Remove Metal frame

Unscrew sixteen screws as fig 8

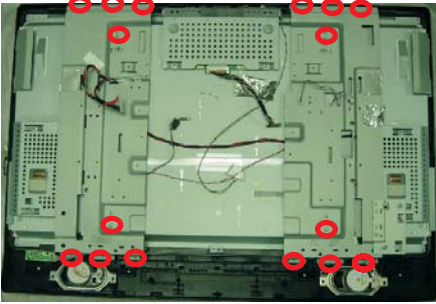


Fig 8

In warranty, it is not allowed to disassembly the LCD panel, even the
backlight unit defect.

Out of warranty, the replacment of backlight unit is a correct way
when the defect is cused by backlight (CCFL,Lamp).

Step 8 Remove AL foil

Unscrew eight screws as fig 9



Fig 9



Fig 10



Fig 11

Service Position

Insulation material

4.2 Set Re-assembly

To re-assemble the whole set, execute all processes in reverse order.

Notes:

- While re-assembling, make sure that all cables are placed and connected in their original position.
- Pay special attention not to damage the EMC foams at the SSB shielding. Check that EMC foams are put correctly on their places.

5. Service Modes, Error Codes and Fault Finding

index of this chapter:

5.1 CSM

5.2 Factory Mode

5.3 Repair Flow Chart

5.1 CSM

It can display CSM windows message when press 1-2 3-6 5-4 on the button (RC) remote control in normal operation mode.
The following information is displayed on screen:

CSM Item	Contents	Remark
1: Set Type	32MF337B/27	Model Name
2: Production code	BZ3A0704790027	14 digit production-code(serial number)
3: SW-naming main-processor	FL3 32MF337BU_V2.00	SW Version(FL= family,32MF337B=Model, U=Nafta region V=Version,2=SW main version,00=SW sub version)
4: Code 1	00 00 00 00 00	Error codes in NVM/EEPROM (5 last logged errors)
5: Code 2	00 00 00 00 00	Error codes in NVM/EEPROM (5 first logged errors)
6: Key (HDCP)	Invalid	HDMI information whether HDCP-key is valid
7: Digital signal quality ATSC		Digital signal level

About error code,Please refer to the table below.

Error code	Event
0x01	DDR error
0x02	IIC bus error
0x03	Tuner error
0x04	Demod error

5.2 Factory Mode

It can enter Factory Mode

1. Press "Menu" in normal operation mode to enter OSD.
2. Press "062596+Menu" on the button (RC) remote control in OSD.
3. Press "Menu" again. The screen will appear "FAC" in top right corner.

OSD behavior:

Before press number key change OSD item

Now remove previous function, press number key then press OK will change value

Item	Description	Range	method of operation	Status
//Action Items				
0 Exit Factory			press OK.	Pass
1 RESET_SPC	reset item SP_GAIN_BRI_XXX to SP_GAIN_CLR_XXX to default value		press OK.	Pass
2 RESET_CSM_CODE	Reset CSM ERROR Code to 0		press OK.	Pass
3 AUTO_COLOR	PC: any pattern has black and white YPbPr:SMPTEbar(color bar), any timing.		press OK. when autocolour, the OSD disappear, when finished. OSD appear.	Pass
//Switch Items				
4 VIRGIN Mode			On/Off	Pass
5 AGING MODE	turn<On> and no signal input		On/Off	Pass
6 GAMMA_TABLE	use gamma table or not		On/Off	
7 COLOR_ENHANCE			On/Off	Pass
8 SET_PIN			On/Off	Pass
9 ORT_MODE	if On, AC switch on/off turn on the TV		On/Off	Pass
//ADC Gain & Offset (values different by VGA and YPbPr) AutoColor changes those items				
10 ADC_GAIN_R		0~255	Press Left and Right to change value	Pass
11 ADC_GAIN_G		0~255		Pass
12 ADC_GAIN_B		0~255		Pass
13 ADC_OFFSET_R		0~127		Pass
14 ADC_OFFSET_G		0~127		Pass
15 ADC_OFFSET_B		0~127		Pass
//Color Temperature (values different by AV,VGA,DTV,HDMI,YPbPr)				
16 CLR_TEMP_R	Back-End Scaler R G B Gain	0~255	Press Left and Right to change value	Pass
17 CLR_TEMP_G		0~255		Pass
18 CLR_TEMP_B		0~255		Pass
//Smart Picture (values different by smart picture)				
19 SP_MODE_3DNR	Except YPbPr 720P above timing	0~5	Press Left and Right to change value	Pass
20 SP_MODE_PWM	(when Dynamic contrast Off)	0~255		Pass
//Smart Picture Default (values different by AV,DTV,HDMI,YPbPr) Front-End, because each source has the same smart picture setting, for different between each source				
21 SP_GAIN_BRI_DTV	Brightness	0~255	Press Left and Right to change value	Pass
22 SP_GAIN_BRI_AV		0~255		Pass
23 SP_GAIN_BRI_YPBPR		0~255		Pass
24 SP_GAIN_BRI_HDMI		0~255		Pass
25 SP_GAIN_BRI_VGA		0~255		
26 SP_GAIN_CNT_DTV	Contrast	0~255		Pass
27 SP_GAIN_CNT_AV		0~255		Pass
28 SP_GAIN_CNT_YPBPR		0~255		Pass
29 SP_GAIN_CNT_HDMI		0~255		Pass
30 SP_GAIN_CNT_VGA		0~255		
31 SP_GAIN_TINT_DTV	Color	0~255		Pass
32 SP_GAIN_TINT_AV		0~255		Pass
33 SP_GAIN_TINT_YPBPR		0~255		Pass
34 SP_GAIN_TINT_HDMI		0~255		Pass
35 SP_GAIN_CLR_DTV	Color	0~255		Pass
36 SP_GAIN_CLR_AV		0~255		Pass

39	VIDEO_PWM_NORMAL		0~255		Pass
40	VIDEO_PWM_MEDIUM		0~255		Pass
41	VIDEO_PWM_MAXIMUN		0~255		Pass
42	VGA_PWM_MIN	to limit PC brightness range	0~255	Dark	Pass
43	VGA_PWM_MAX		0~255	Bright	Pass
	//YPbPr H/V Position	(value different by each timing)			
44	YPBPR_POS_H				Pass
45	YPBPR_POS_V	interlace no effect, only progressive can be adjusted			Pass
46	YPBPR_PHASE	Manual adjust HDMI phase			Pass
	//Audio				
47	AUD_GAIN_TV	volume different between audio source, for each source volume to be the same	64~-64		Pass
48	AUD_GAIN_DTV		64~-64		Pass
49	AUD_GAIN_HDMI		64~-64		Pass
50	AUD_GAIN_SCART		64~-64		Pass
51	AUD_GAIN_DVD				
52	AUD_HEADPHONE_VOL		12~-64		Pass
53	AUD_BALANCE	amplifier left and right volume	-50~50	Press Left and Right to change value	Pass
	//Tuner & Panel Id				
54	TUNER_ID	4 is PHILIPS_FQA1236, 5 is Forward, 6 is PHILIPS_FQA1236_E, 7 is ALPS_TDQU4	4,5,6,7		Pass
55	PANEL_ID	value the same to CLI command			Pass

Select Smart picture to display a list of predefined picture settings, each corresponding with specific factory settings.

Personal refers to the personal preference settings of picture in the picture menu.

Note: This Magnavox TV has been set at the factory to look best in bright store environments, which typically use fluorescent lighting. As your home will likely not be as well lit as a store, we recommend that you cycle through the various smart picture modes to find the one that best suits your own viewing conditions. Most consumers will find that Natural is the correct choice.

You can press the Smart picture button on the remote control repeatedly to select either Personal, Rich, Natural, Soft, or Powersaver picture settings.

Note:

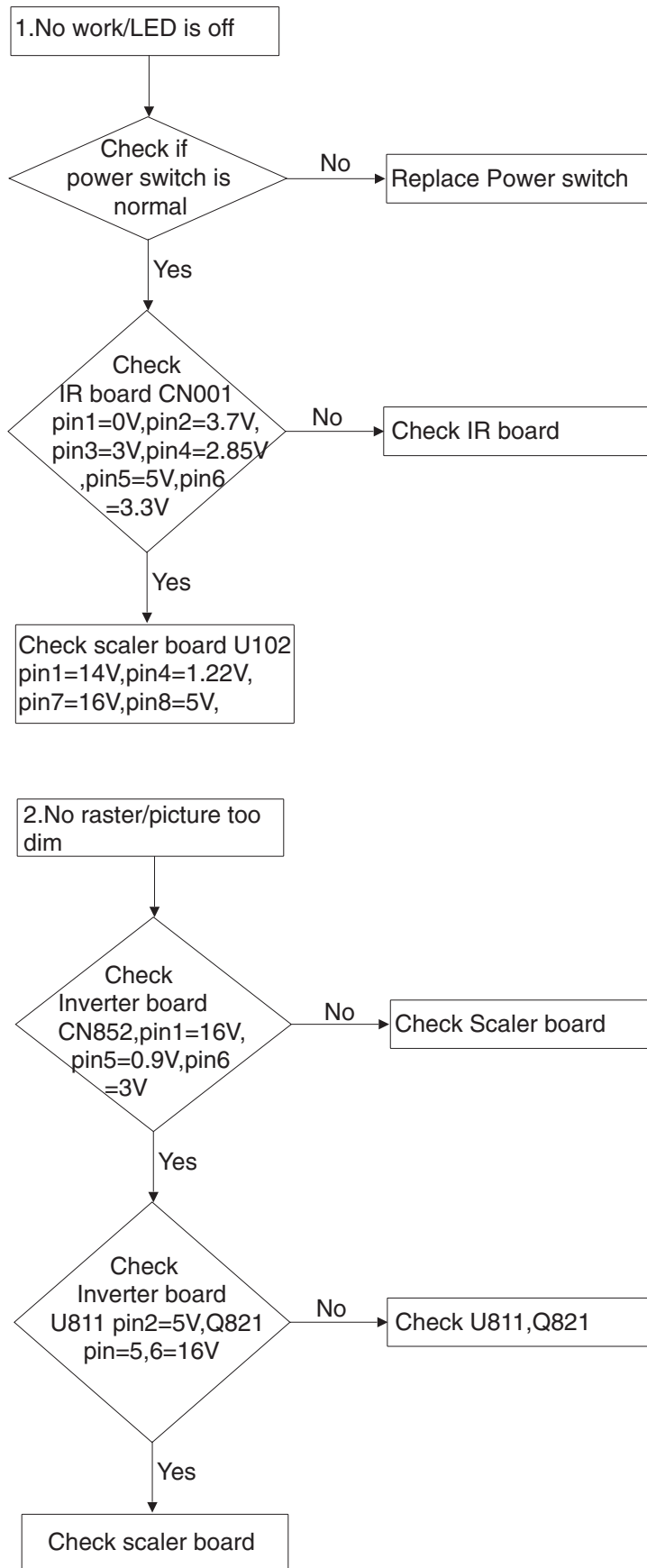
- When you watch programs by Composite Video signal, it's recommended to select Soft or Power saving Mode via Smart picture.

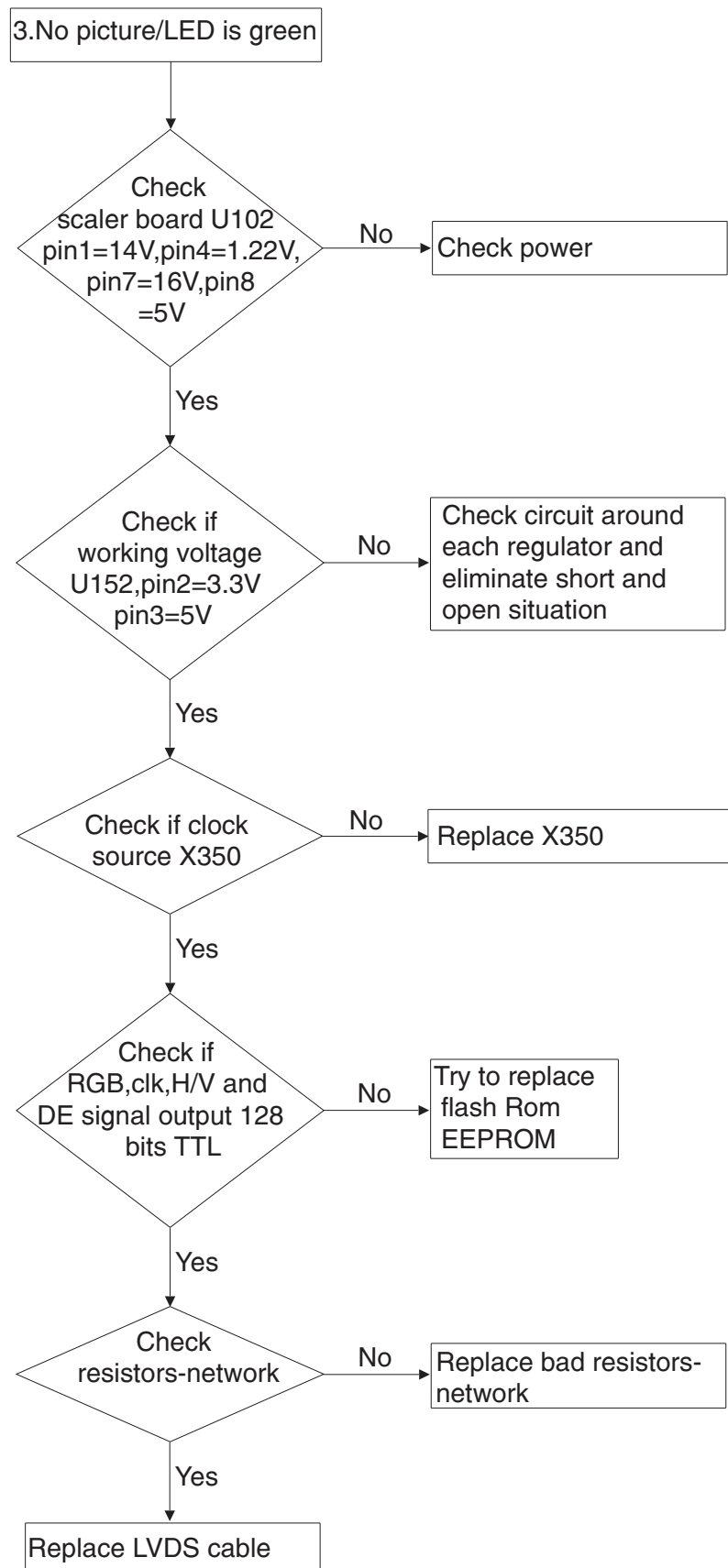
- The moment you are in a predefined Smart picture setting and you modify the Picture menu, all values of the menu will overwrite those previously made in personal setting.

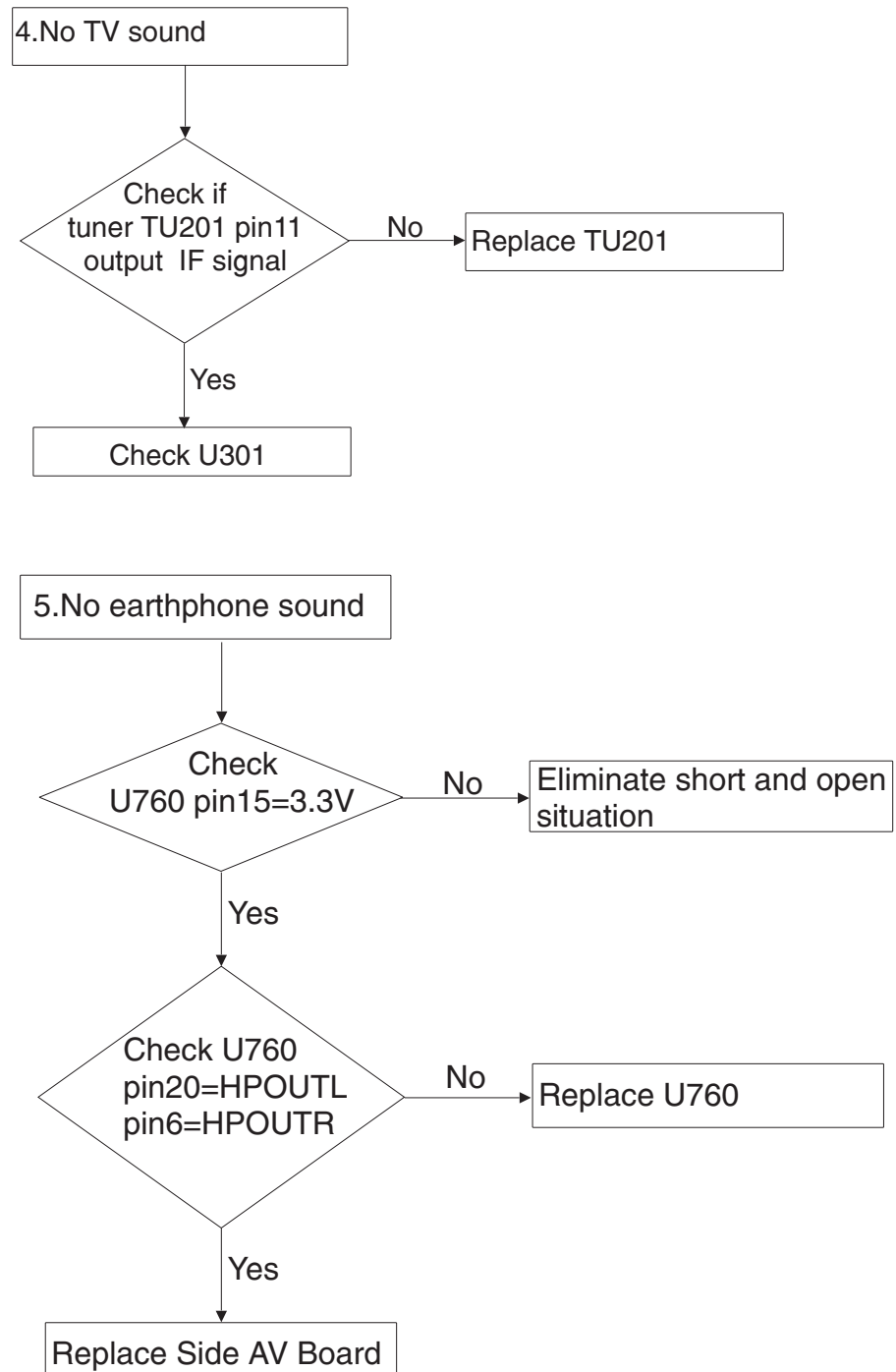
Smart picture control items: (values different by smart picture)

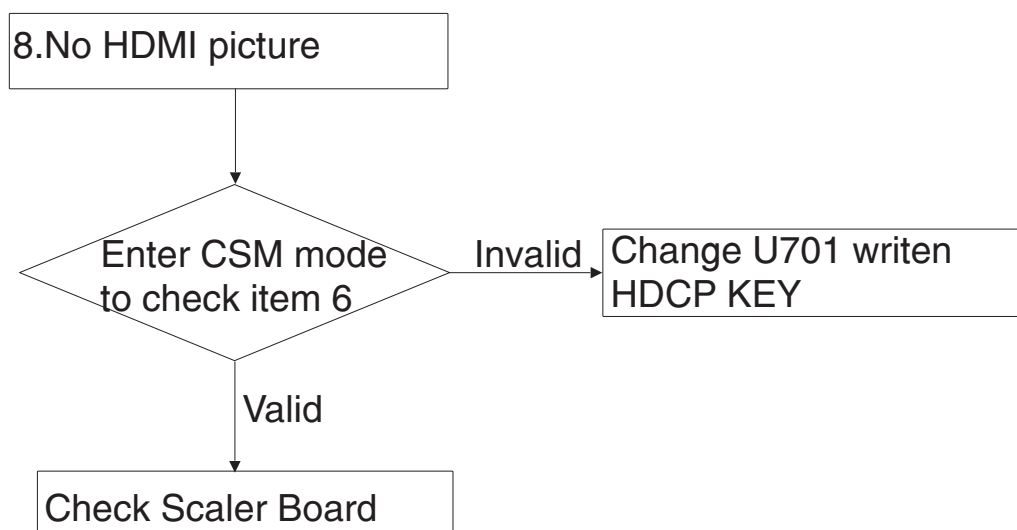
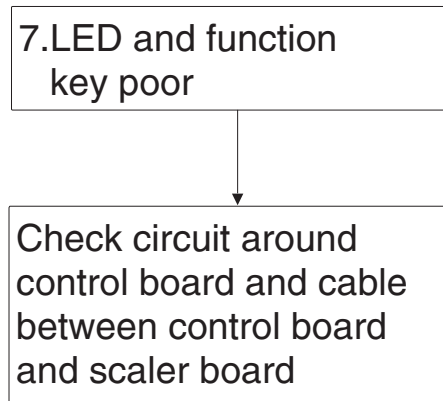
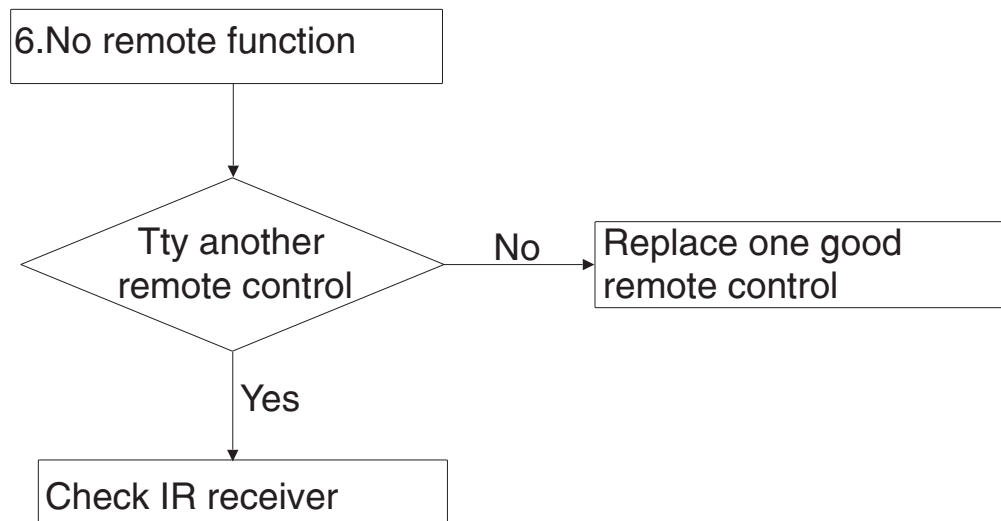
	User Menu OSD: (Back-End)	can be changed when factory mode
	Contrast	
	Brightness	
	Color	
	Sharpness	
	color temperature	
	Tint	
	Noise Reduction	
	Dynamic Contrast	
	Factory menu OSD	can be changed when factory mode
	SP_MODE_PWM (when Dynamic contrast Off)	
	SP_MODE_3DNR (range 0 to 5)	

5.3 Repair Flow Chart





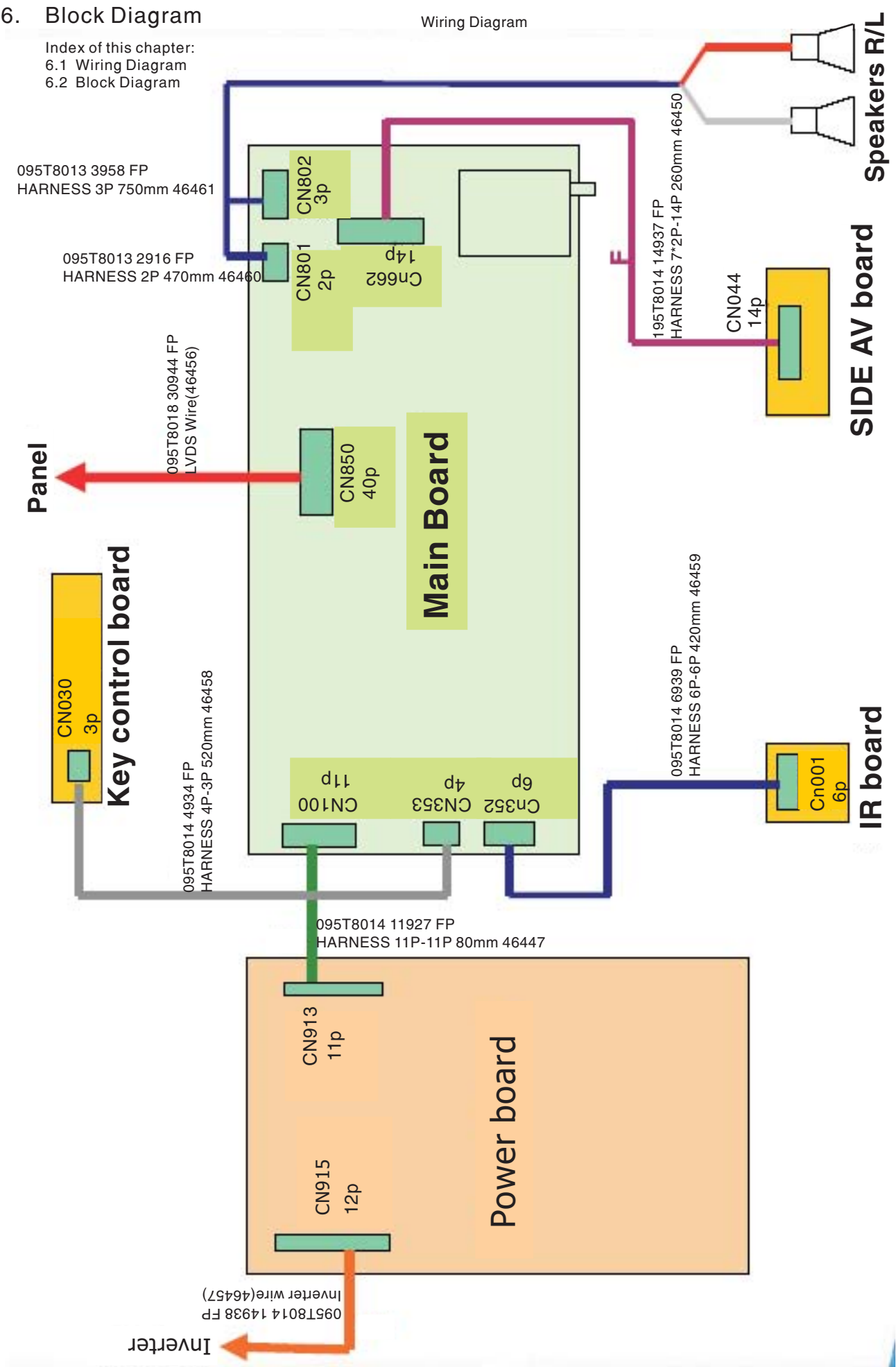




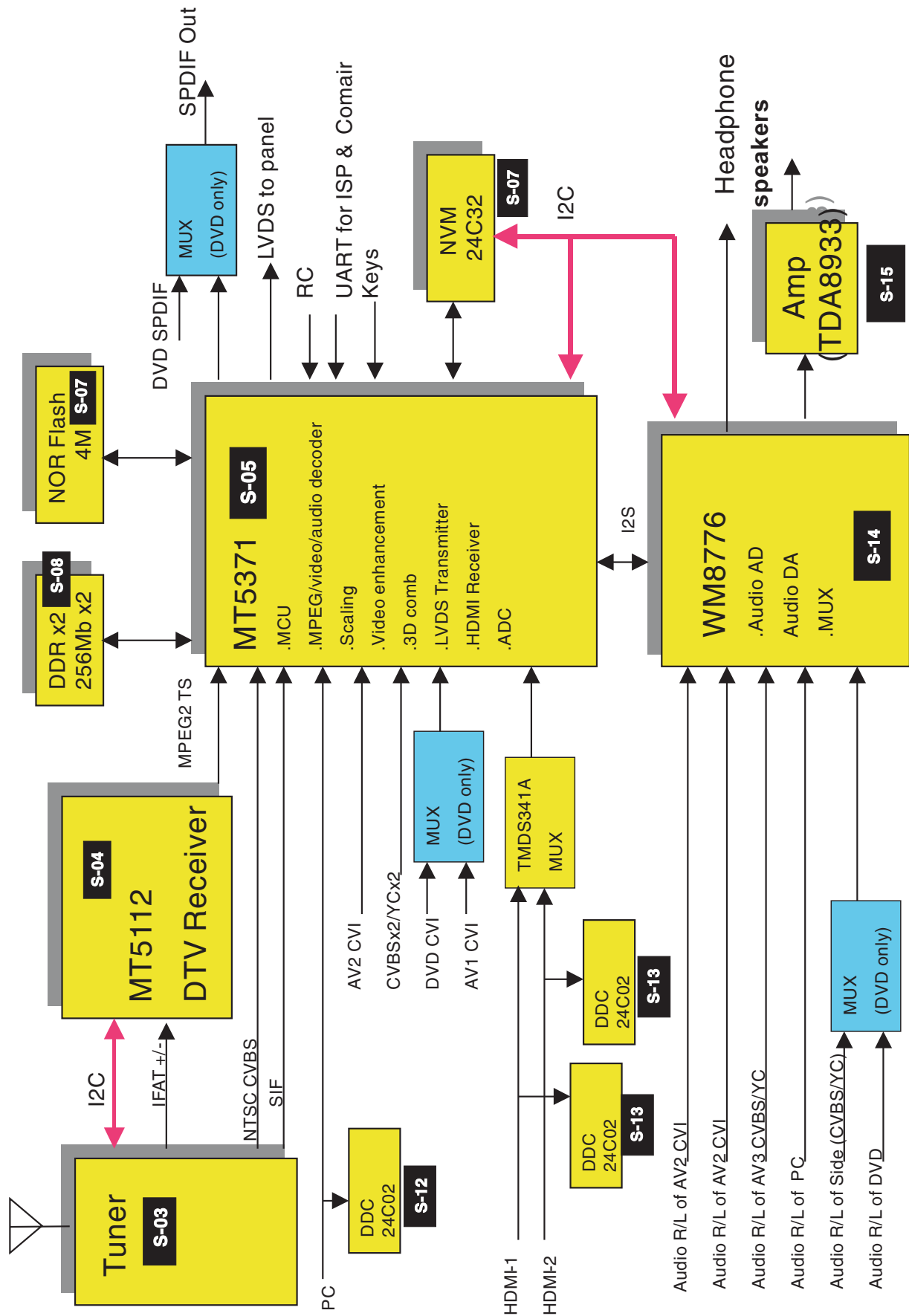
6. Block Diagram

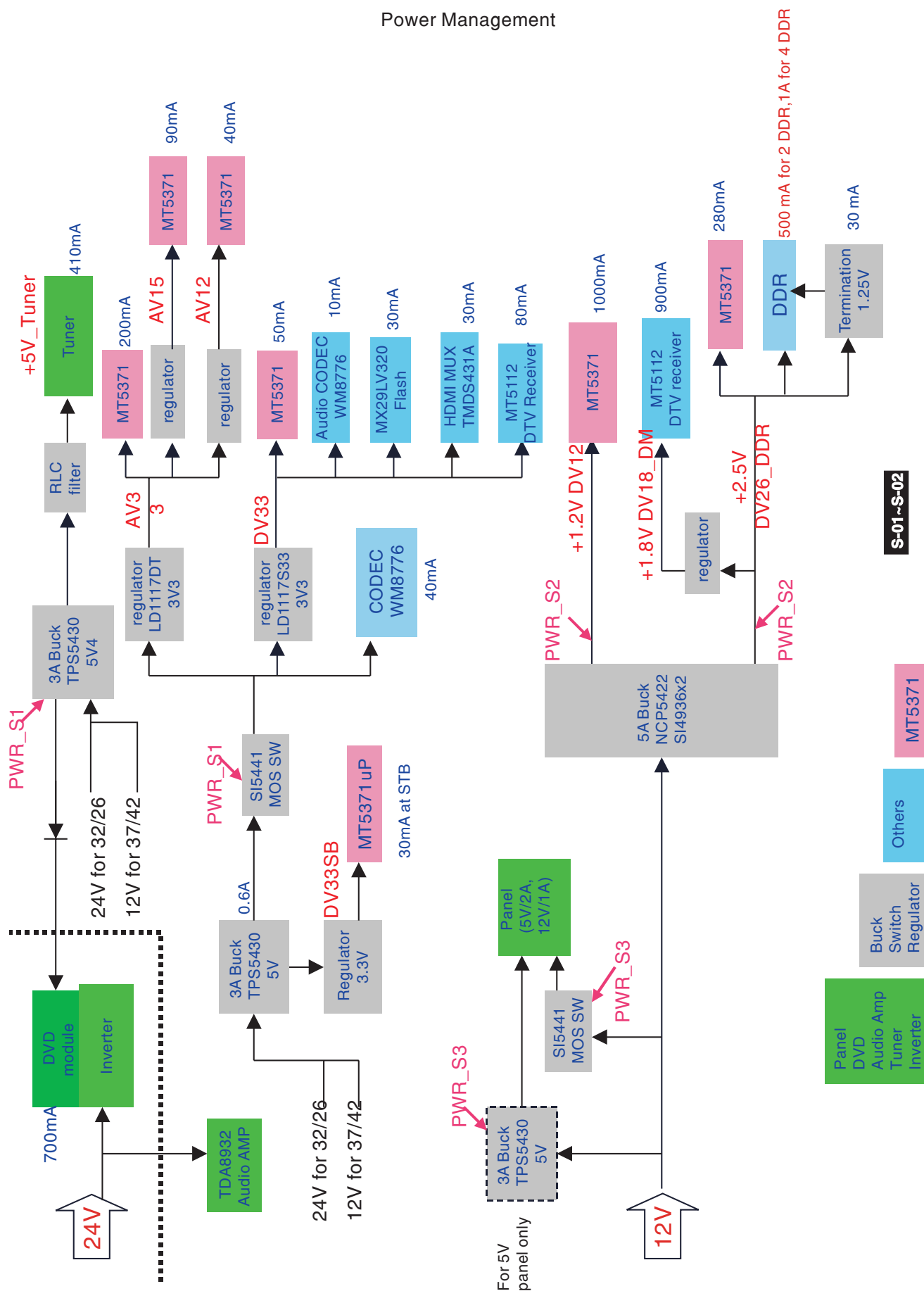
Index of this chapter:
6.1 Wiring Diagram
6.2 Block Diagram

Wiring Diagram



Function Block of Main Board

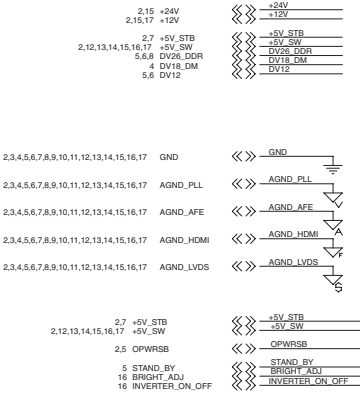
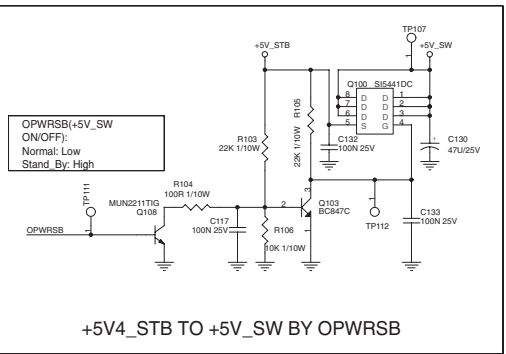
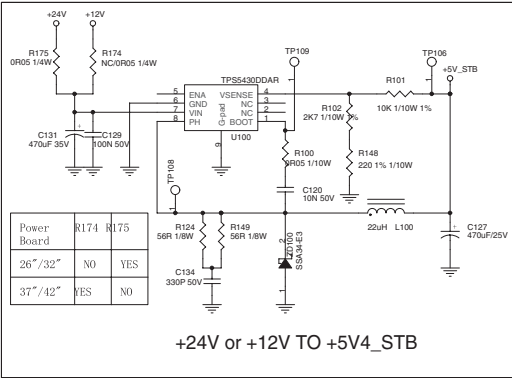
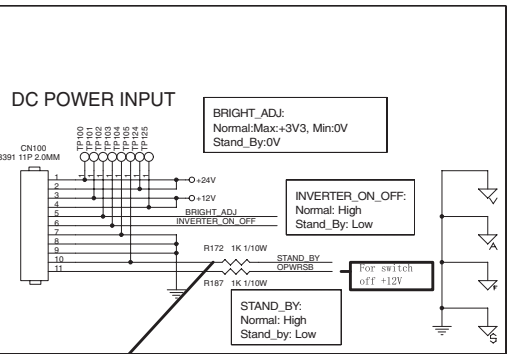




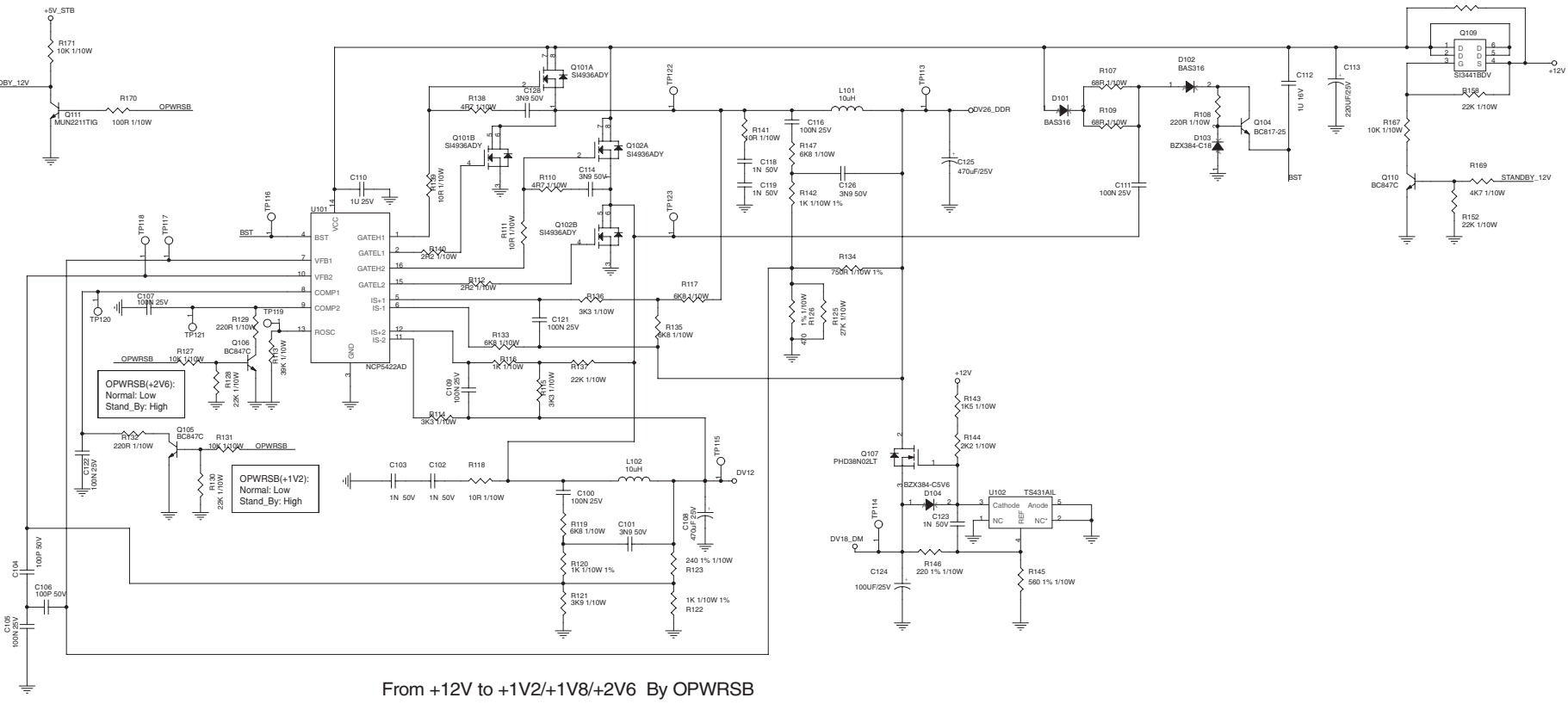
Scaler Board Schematic Diagram-Power

DL MT5371 / MT5112 - 4 LAYERS

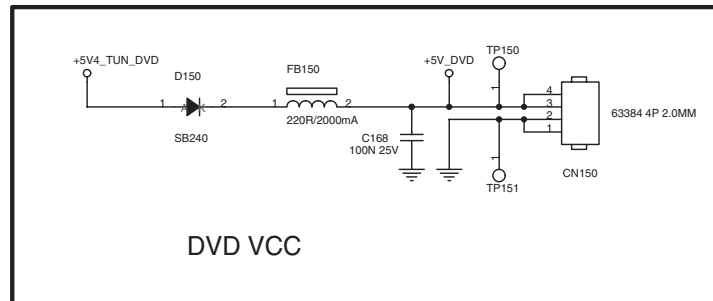
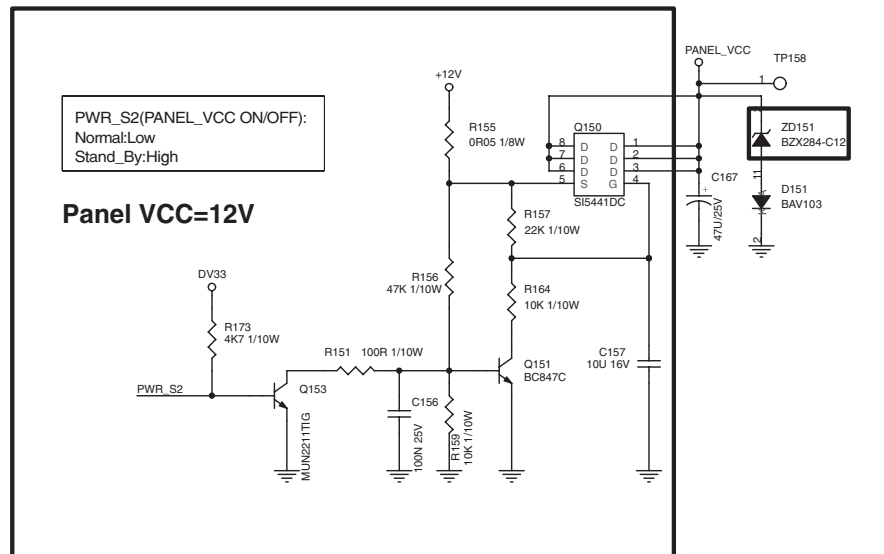
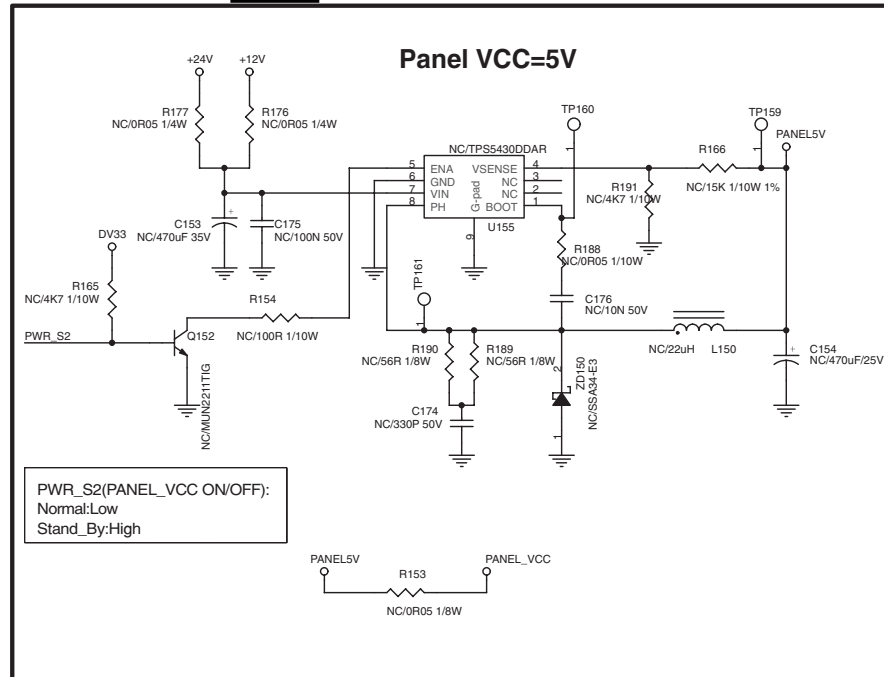
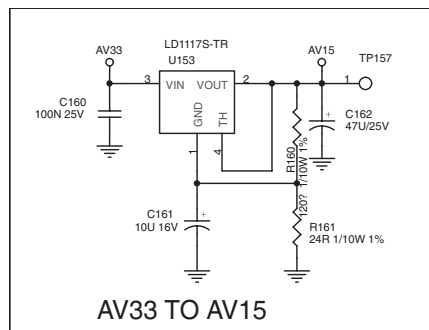
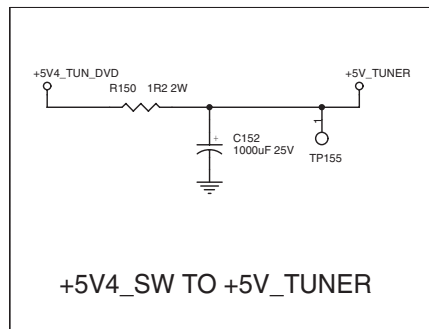
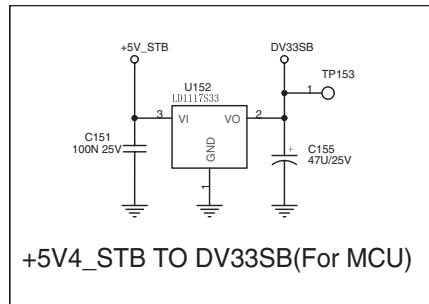
S-01



- CN100 B1 C100 G5
- C101 G6 C102 G5
- C103 G4 C104 G2
- C105 H2 C106 H2
- C107 F3 C108 G6
- C109 F5 C110 E4
- C111 E9 C112 D10
- C113 D11 C114 E4
- C116 D7 C117 C8
- C118 E7 C119 E7
- C120 B6 C121 F5
- C122 G2 C123 G8
- C124 G6 C125 E8
- C126 E7 C127 C8
- C128 D5 C129 B4
- C130 B9 C131 B4
- C132 B9 C133 C9
- C134 C5 D101 D5
- D102 D10 D103 E10
- D104 G8 L100 C6
- L101 D7 L102 G6
- Q100 B9 Q101A D5
- Q101B E5 Q102A E6
- Q103B E8 Q103 C9
- Q104 D10 Q105 C3
- Q106 F3 Q107 G8
- Q108 C9 D100 D12
- Q110 E11 Q111 D2
- R100 B6 R101 B6
- R102 B6 R103 B6
- R104 C8 R105 B9
- R106 C9 R107 D5
- R108 D10 R109 C9
- R110 E5 R111 E5
- R112 E5 R113 F3
- R114 F5 R115 F5
- R116 F5 R117 F6
- R118 G5 R119 G5
- R120 G5 R121 H5
- R122 H6 R123 G6
- R124 C5 R125 F7
- R126 F7 R127 F3
- R128 F3 R129 F3
- R130 C3 R131 C3
- R132 F2 R133 F5
- R134 E7 R135 F6
- R136 F6 R137 F6
- R138 D5 R139 E5
- R140 E5 R141 D7
- R142 E7 R143 F6
- R144 G8 R145 G9
- R146 G8 R147 E7
- R148 B6 R149 C5
- R152 E12 R158 D12
- R167 D11 R168 D12
- R169 E12 R170 D2
- R171 D2 R172 C2
- R174 B4 R175 B4
- R187 C2 TP100 B1
- TP101 B1 TP102 B1
- TP103 B1 TP104 B1
- TP105 B1 TP106 B6
- TP107 B9 TP108 B5
- TP109 B6 TP111 C7
- TP112 C9 TP113 D8
- TP114 G8 TP115 G7
- TP116 E3 TP117 E3
- TP118 E3 TP119 F3
- TP120 F2 TP121 F3
- TP122 D6 TP123 E6
- TP124 E2 TP125 E2
- U100 B5 U101 E4
- U102 G8 ZD100 C6



Panel VCC=5V



	1,15	+24V	⟷	+24V
	1,15,17	+12V	⟷	+12V
	5,6	AV12	⟷	AV12
	1,12,13,14,15,16,17	+5V_SW	⟷	+5V_SW
	3	+5V_TUNER	⟷	+5V_TUNER
	1,7	+5V_STB	⟷	+5V_STB
	2,4,5,6,7,11,13,14,16	DV33	⟷	DV33
	8	AV33	⟷	AV33
	5,6,7,15,16	DV33SB	⟷	DV33SB
	6	AV15	⟷	AV15
	16	PANEL_VCC	⟷	PANEL_VCC
	1,5	OPWRSB	⟷	OPWRSB
	5	PWR_S2	⟷	PWR_S2
	7	+5V_DVD	⟷	+5V_DVD
1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	GND	⟷	GND	
1,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	AGND_AFE	⟷	AGND_AFE	

ITEM	PANEL VCC: +12V	PANEL VCC: +5V
R164	10K	N/C
Q153	MUN2211	N/C
R155	0R	N/C
R157	22K	N/C
R156	47K	N/C
R151	100R	N/C
R159	10K	N/C
R173	4K7	N/C
C156	100N	N/C
C157	10U	N/C
C167	47U	N/C
Q160	SI5441	N/C
Q151	BC847	N/C
ZD151	BZX284-C12B	BZX84-CV51
R153	N/C	0R
R154	N/C	100R
R165	N/C	4K7
R166	N/C	15K
C153	N/C	470U
L150	N/C	22U
C154	N/C	470U
U155	N/C	TPS5430
Q152	N/C	MUN2211
ZD150	N/C	SSA34
R176	N/C	0R
C175	N/C	100N
R189	N/C	56R
R190	N/C	56R
C174	N/C	330P
R188	N/C	0R
C176	N/C	10N
R191	N/C	4K7

CN150 17 C150 C20

C151 A3 C152 C4

C153 B6 A154 B8

C155 A4 C156 E6

C157 E8 C158 A1

C159 A2 C160 D3

C161 A4 C162 D4

C163 A2 C164 B3

C165 D2 C166 C1

C167 E8 C168 G6

C169 G3 C170 F2

C171 F3 C172 F2

C173 G4 C174 C7

C175 B6 C176 B7

D150 B6 C151 E8

FD150 B6 L150 B8

L151 F4

L152 F2 C153 E5

Q153 E6 C154 Q2

R150 C3 R151 E6

R153 C6 C154 B6

R155 D7 R156 E7

R157 E7 R159 E7

R160 D4 R161 E4

R162 D7 R163 D7

R164 E7 R165 B5

R166 A8 C173 E6

R176 A6 R177 A6

R178 G2 R179 F4

R180 C3 R181 F4

R182 F3 R183 G3

R184 F4 R185 F2

R186 F4 R187 A2

R189 E7 R190 E7

R191 B8 TP150 F7

TP151 G7 TP152 A2

TP154 A4 TP154 C2

TP155 C4 TP156 D2

TP157 D4 TP158 D8

TP159 A8 TP160 A7

TP161 A2 TP162 A2

U151 C2 U152 A4

U153 D3 U154 D2

U155 A7 U156 F3

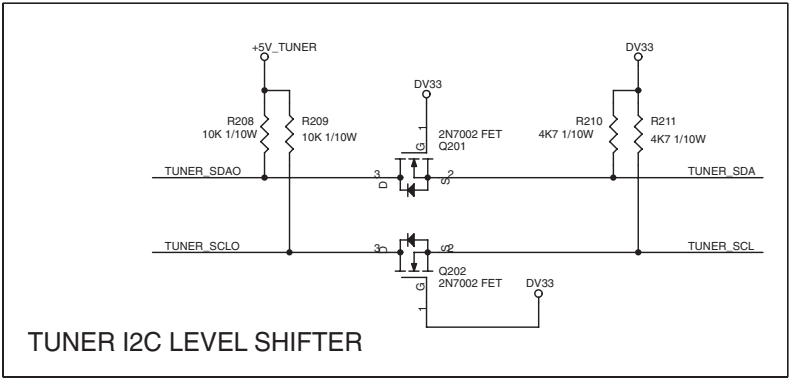
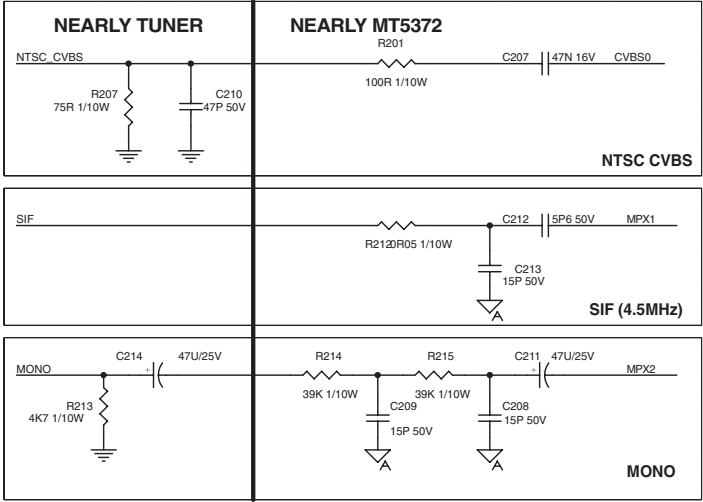
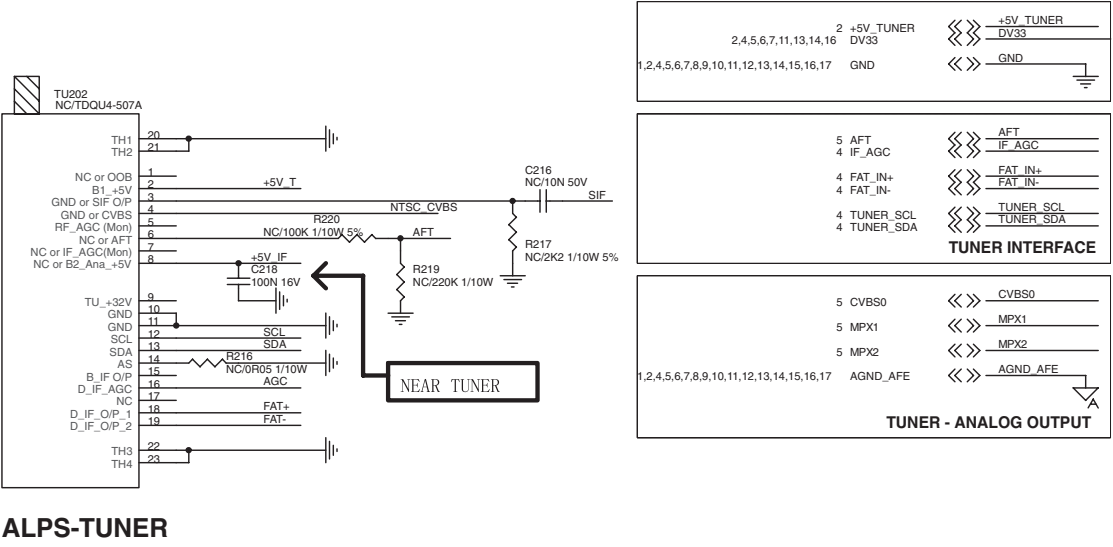
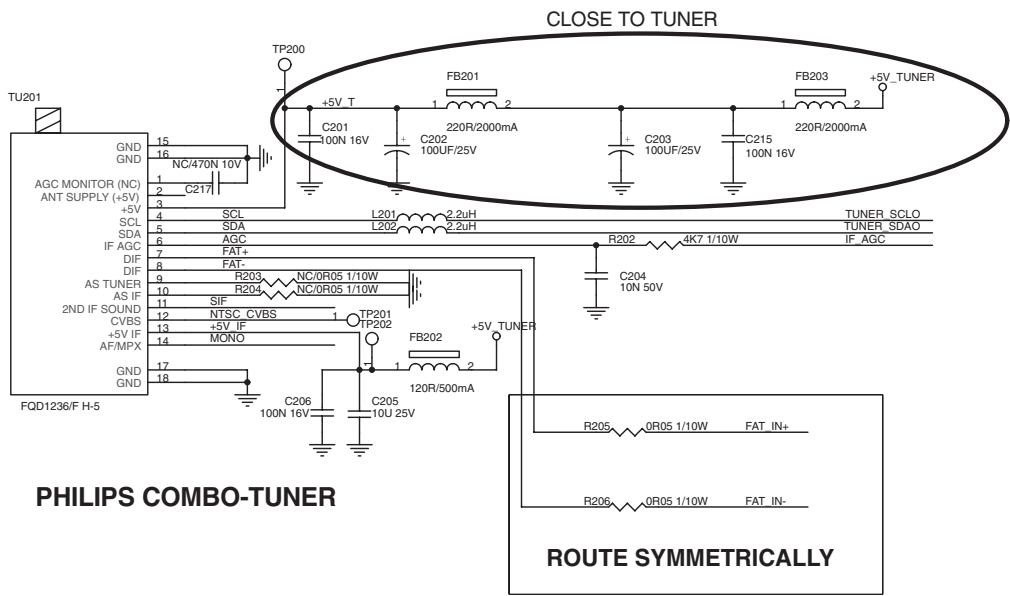
ZD150 B7 ZD151 D6

Scaler Board Schematic Diagram-Tuner

S-03

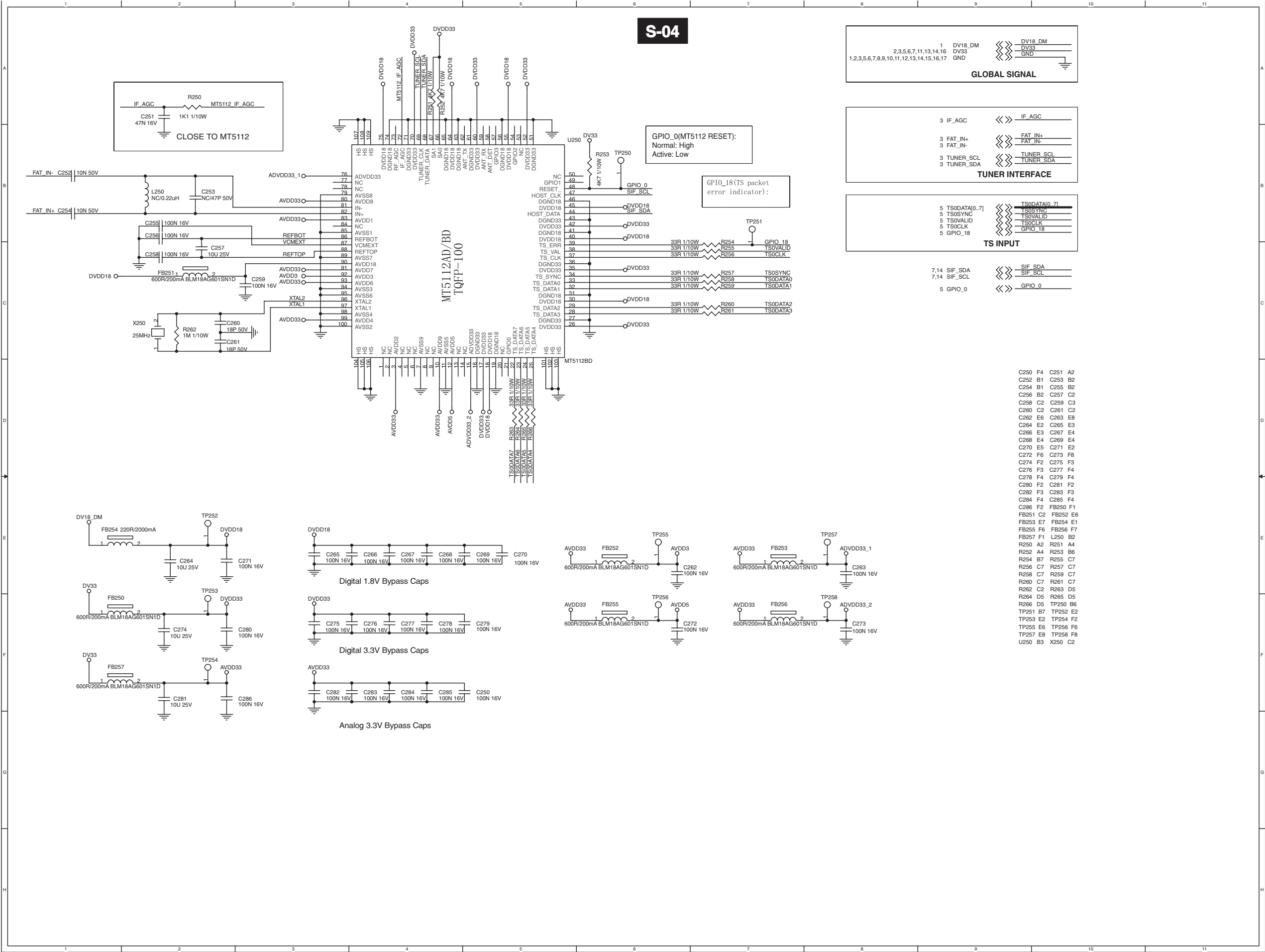
TU201 AND TU202 IS SAME LOCATION

TUNER	TU201	TU202	C216	R217	R207	R219	R220	C218	R216
PHILIPS	FQD1236	NC	NC	NC	75R	NC	NC	NC	NC
ALPS	NC	TDUQ2	10N	2K2	NC	220K	100K	100N	0R

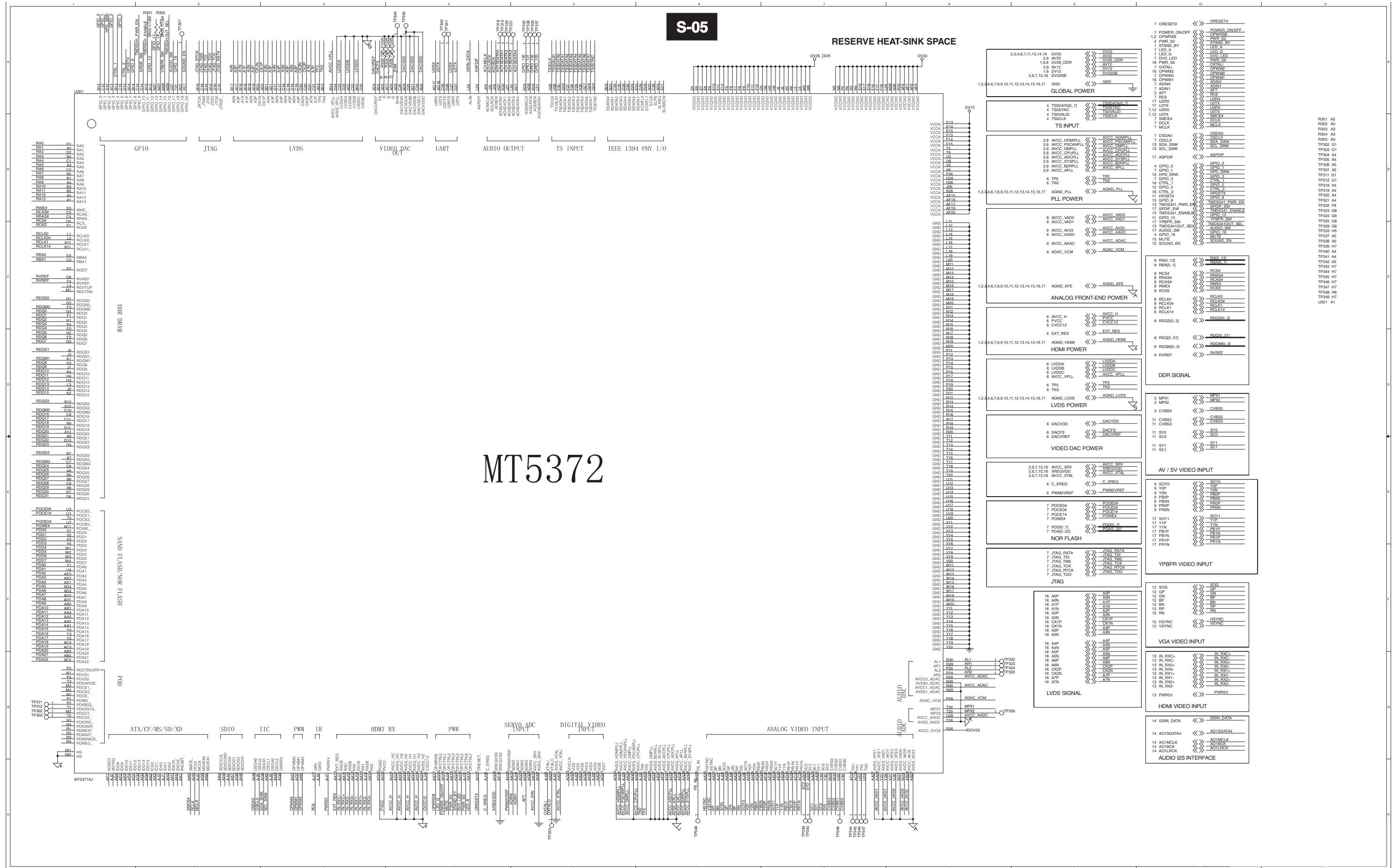


C201 C3 C202 C3
C203 C4 C204 C4
C205 D3 C206 D3
C207 E4 C208 G4
C209 G3 C210 F3
C211 G4 C212 F4
C213 F4 C214 G2
C215 C5 C216 C9
C217 C2 C218 C7
FB201 B3 FB202 D3
FB203 B5 L201 C3
L202 C3 Q201 F8
Q202 F8 R201 E3
R202 C4 R203 C3
R204 C3 R205 D4
R206 D4 R207 F2
R208 F7 R209 F7
R210 F9 R211 F9
R212 F3 R213 G2
R214 G3 R215 G4
R216 D7 R217 C9
R219 C8 R220 C8
TP200 B3 TP201 C3
TP202 D3 TU201 C1

Scaler Board Schematic Diagram-ASIC



Scaler Board Schematic Diagram-ATSC



S-06

C401 E7
C402 A1
C403 A3
C404 A3
C405 A7
C406 A8
C407 A5
C408 A6
C409 A6
C410 A3
C411 A3
C412 B1
C413 B8
C414 B8
C415 B8
C416 B9
C417 B5
C418 B6
C419 B6
C420 B3
C421 B3
C422 B6
C423 B1
C424 B7
C425 B3
C426 B3
C427 C1
C428 C5
C429 C6
C430 C1
C431 C1
C432 D1
C433 D3
C434 D5
C435 D6
C436 D6
C437 D6
C438 D7
C439 D7
C440 D7
C441 D8
C442 D8
C443 D3
C444 D4
C445 D4
C446 D4
C447 D4
C448 D3
C449 E1
C450 E5
C451 E6
C452 E6
C453 E6
C454 E7
C455 E7
C456 E8
C457 E8
C458 E3
C459 E1
C460 E4
C461 E5
C462 E6
C463 E6
C464 E6
C465 E7
C466 F1
C467 F4
C468 F6
C469 F6
C470 F2
C471 F4
C472 E7
C473 E7
C474 C1
C475 E5
C476 E5
C477 D3
D401 D1
FB402 A7
FB403 A5
FB404 A7
FB405 B5
FB406 C5
FB407 D2
FB408 D3
FB409 F1
FB410 E4
FB411 F6
R401 F2
R402 C2
R403 C3
R404 F1
R405 F1
TP400 D1
TP401 F1
TP403 D4
TP404 E4
TP405 E4
TP406 F6
TP407 A6
TP408 B6
TP409 C6
TP410 A8
TP411 A9

2,3,4,5,7,11,13,14,16 DV33 <<>> DV33
2 AV33 <<>> AV33
1,5,8 DV26_DDR <<>> DV26_DDR
2 AV15 <<>> AV15
2 AV12 <<>> AV12
1,5 DV12 <<>> DV12
2,5,7,15,16 DV33SB <<>> DV33SB
1,2,3,4,5,7,8,9,10,11,12,13,14,15,16,17 GND <<>> GND

GLOBAL POWER

2,5 AVCC_HDMIPLL <<>> AVCC_HDMIPLL
2,5 AVCC_PSCANPLL <<>> AVCC_PSCANPLL
2,5 AVCC_DMPLL <<>> AVCC_DMPLL
2,5 AVCC_CPUPLL <<>> AVCC_CPUPLL
2,5 AVCC_ADCPLL <<>> AVCC_ADCPLL
2,5 AVCC_SYSPLL <<>> AVCC_SYSPLL
2,5 AVCC_B2RPLL <<>> AVCC_B2RPLL
2,5 AVCC_APLL <<>> AVCC_APLL
5 TP0 <<>> TP0
5 TN0 <<>> TN0
1,2,3,4,5,7,8,9,10,11,12,13,14,15,16,17 AGND_PLL <<>> AGND_PLL

PLL POWER

5 AVCC_VAD0 <<>> AVCC_VAD0
5 AVCC_VAD1 <<>> AVCC_VAD1
5 AVCC_AV33 <<>> AVCC_AV33
5 AVCC_ADAC <<>> AVCC_ADAC
5 AVCC_ADAC <<>> AVCC_ADAC
5 ADAC_VCM <<>> ADAC_VCM
1,2,3,4,5,7,8,9,10,11,12,13,14,15,16,17 AGND_AFE <<>> AGND_AFE

ANALOG FRONT-END POWER

5 AVCC_H <<>> AVCC_H
5 PVCC <<>> PVCC
5 CVCC12 <<>> CVCC12
5 EXT_RES <<>> EXT_RES
1,2,3,4,5,7,8,9,10,11,12,13,14,15,16,17 AGND_HDMI <<>> AGND_HDMI

HDMI POWER

5 LVDDA <<>> LVDDA
5 LVddb <<>> LVddb
5 LVDDb <<>> LVDDb
5 AVCC_VPLL <<>> AVCC_VPLL
5 TP3 <<>> TP3
5 TN3 <<>> TN3
1,2,3,4,5,7,8,9,10,11,12,13,14,15,16,17 AGND_LVDS <<>> AGND_LVDS

LVDS POWER

5 DACVDD <<>> DACVDD
5 DACFS <<>> DACFS
5 DACVREF <<>> DACVREF
5 C_XREG <<>> C_XREG
5 PWM2VREF <<>> PWM2VREF
8 MEM_VREF <<>> MEM_VREF
5 RVREF <<>> RVREF

VIDEO DAC POWER

AV33 FB402 600R/200mA BLM18AG601SN1D AVCC_VAD0 TP407
C407 4UF7 10V C408 100N 16V C409 100N 16V
AV15 FB405 600R/200mA BLM18AG601SN1D AVCC_VAD1 TP408
C417 4UF7 10V C418 100N 16V C419 100N 16V
AV33 FB404 600R/200mA BLM18AG601SN1D AVCC_ADAC TP411
C413 470uF/25V C414 4UF7 10V C415 100N 16V C416 100N 16V
ADAC_VCM C422 10U 25V C424 100N 16V

ANALOG FRONT-END POWER

DV33SB FB406 600R/200mA BLM18AG601SN1D AVCC_AV33 TP409
C428 4UF7 10V C429 100N 16V

DV33 10U 25V C434 100N 16V C435 100N 16V C436 100N 16V C437 100N 16V C438 100N 16V C439 100N 16V C440 100N 16V C441 100N 16V C442 100N 16V
LEFT SIDE RIGHT SIDE TOP SIDE BOTTOM SIDE
DV12 NC/10uF C475 10uF/16V C450 100N 16V C451 100N 16V C452 100N 16V C453 100N 16V C454 100N 16V C455 100N 16V C456 100N 16V C457 100N 16V
LEFT SIDE RIGHT SIDE TOP SIDE BOTTOM SIDE
DV26_DDR NC/10uF C476 10uF/16V C461 100N 16V C462 100N 16V C463 100N 16V C464 100N 16V C465 100N 16V C466 100N 16V C467 100N 16V C468 100N 16V C469 100N 16V
MEM_VREF FB411 600R/200mA BLM18AG601SN1D RVREF TP406
C468 4UF7 10V C469 100N 16V

DIGITAL POWER

AV12 AVCC_HDMIPLL C403 100N 16V
AVCC_PSCANPLL C410 100N 16V
AVCC_DMPLL C420 100N 16V
AVCC_CPUPLL C425 100N 16V
TP0 R402 AVCC_SYSPLL NC/51R 1/10W
AV12 AVCC_ADCPLL C404 100N 16V
AVCC_SYSPLL C411 100N 16V
AVCC_B2RPLL C421 100N 16V
AVCC_APLL C426 100N 16V
TN0 R403 AVCC_SYSPLL NC/51R 1/10W

PLL POWER

AV15 FB407 600R/200mA BLM18AG601SN1D DACVDD C433 100N 16V
DACVDD C448 100N 16V
DACVDD C458 100N 16V
DACFS R401 820R 1/10W
DACVREF C470 100N 16V

VIDEO DAC POWER

AV33 FB408 600R/200mA BLM18AG601SN1D AVCC_H C443 10uF/16V C444 100N 16V C445 100N 16V C446 100N 16V C447 100N 16V
C477 NC/10uF 16V
AV33 FB401 600R/200mA BLM18AG601SN1D PVCC TP404
C460 100N 16V
AV12 FB410 600R/200mA BLM18AG601SN1D CVCC12 TP405
C467 100N 16V
EXT_RES C471 NC/100N 16V

HDMI POWER

DV33SB AVCC_SRV C402 100N 16V
DV33SB XREGVDD C412 100N 16V
DV33SB AVCC_XTAL C423 100N 16V
C_XREG NC/10uF 16V C474 C427 10uF/16V
PWM2VREF C430 47U/25V C431 100N 16V

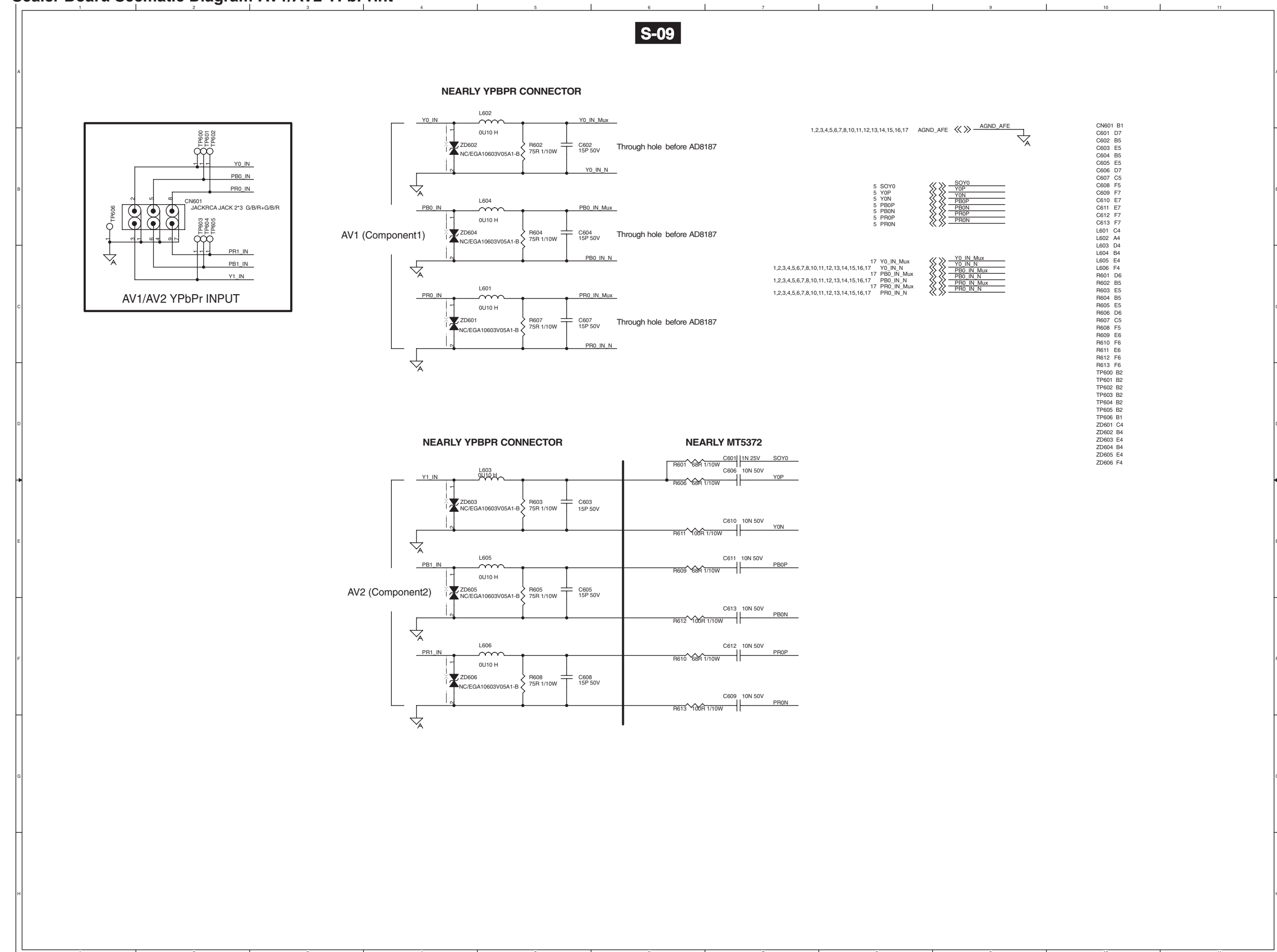
STANDBY POWER

DIGITAL POWER

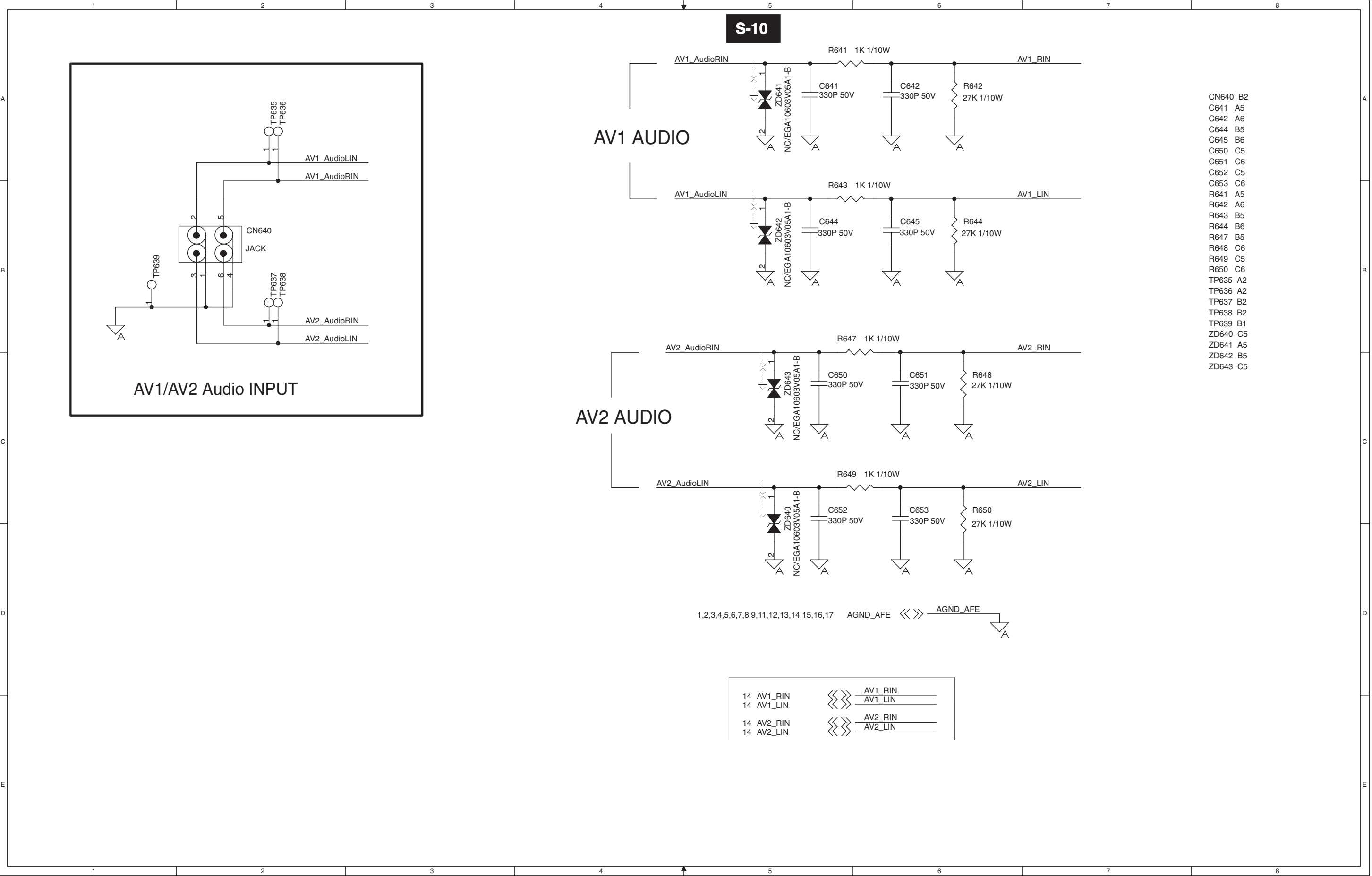
[illegible]

**BYPASS CAP. FOR TERMINATOR
(EVERY 2 RESISTOR PUT 1 BYPASS CAP.)**

Scaler Board Schematic Diagram-AV1/AV2 YFbPrint



Scaler Board Schematic Diagram-AV1/AV2 Audio Input



S-11

AV3_CVBS/S-VIDEO/Audio RL

SPDIF OUT

SIDE AV/CVBS/SV/HEAD PHONE

SVDET1 (GPIO_12):
S_Video cable plug: Low
No cable plug: High

HPDET# (GPIO_7):
Headphone cable plug: High
No cable plug: Low

NEARLY AV CONNECTOR

NEARLY MT5372

AV3_AUDIO

NEARLY IO CONNECTOR

NEARLY MT5372

AV3_S-Video

Side_CVBS

Side_S-Video

NEARLY MT5372

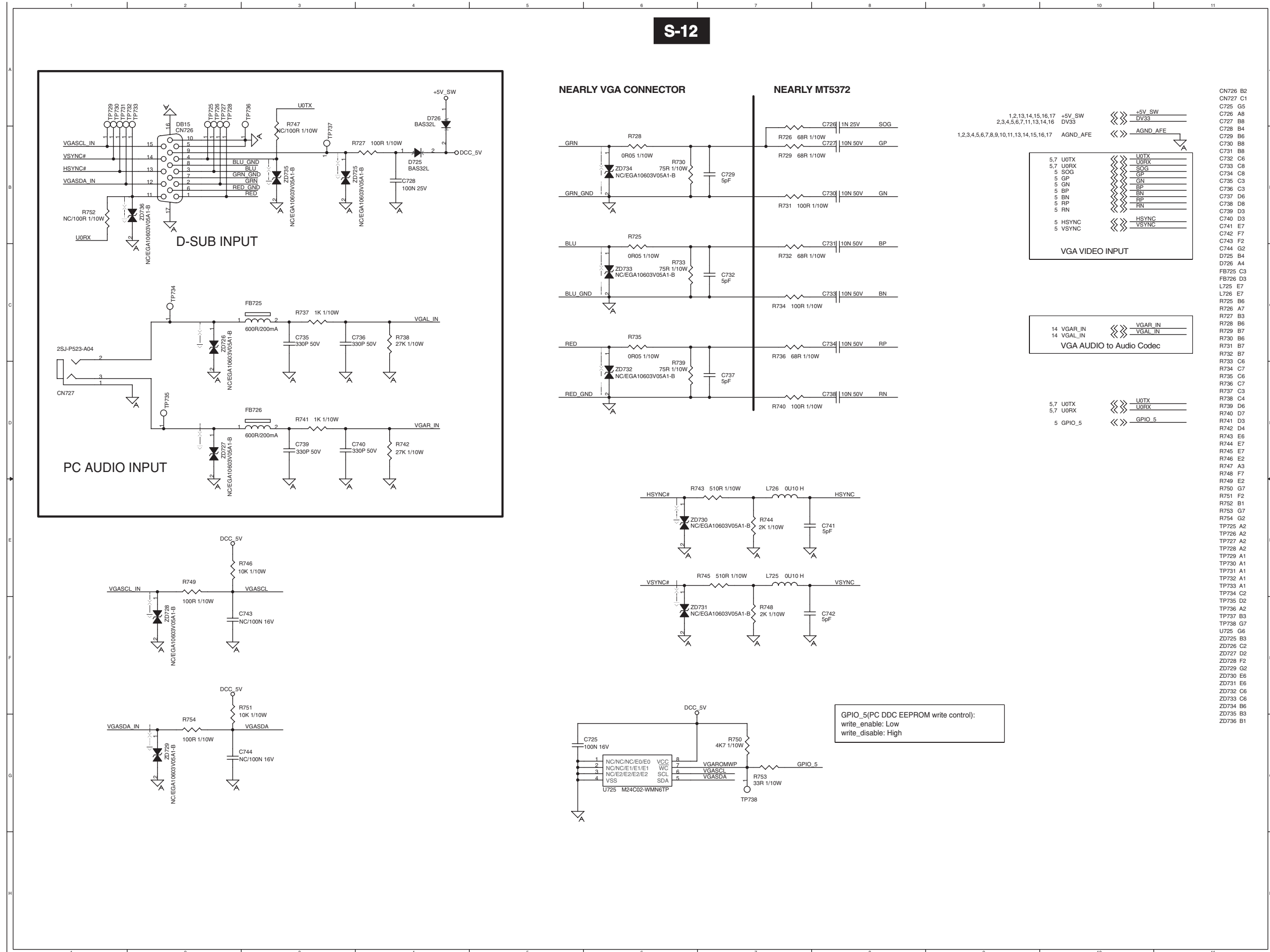
SIDE AV2/S2/HEAD PHONE

AV3

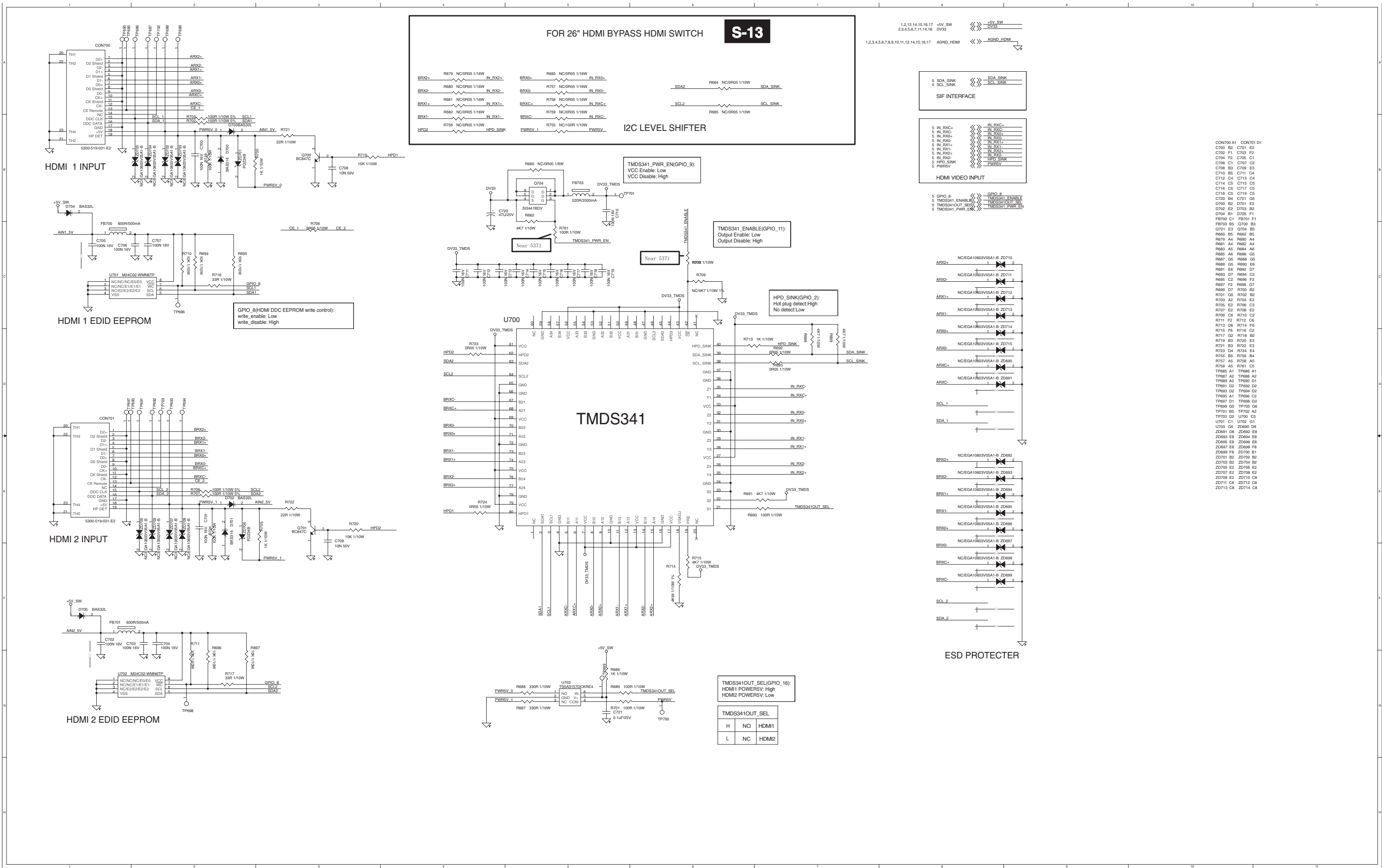
CN660 D1
CN661A B1
CN661B A1
CN662 F1
C660 D2
C661 D2
C662 E7
C663 E6
C664 E7
C665 F6
C666 C6
C667 C6
C668 A7
C669 B6
C670 C6
C671 C6
C672 G7
C673 G7
C674 H7
C675 G2
C676 G1
FB660 F3
FB661 F3
FB662 F3
FB663 F3
L660 A6
L661 E6
L662 E6
R658 F3
R659 G4
R661 D3
R663 E6
R664 E7
R665 E6
R666 E7
R667 B6
R668 A7
R669 B6
R670 C7
R671 C6
R672 C7
R673 F3
R674 G7
R675 G7
R676 H7
R677 F3
R678 D3
TP660 A2
TP661 A2
TP662 A2
TP663 B2
TP664 B2
TP665 D2
TP666 F2
TP667 F1
TP668 F2
TP669 F2
TP670 F2
TP671 F2
TP672 F2
TP673 F2
TP674 F2
TP675 A1
ZD660 B5
ZD661 D2
ZD662 E5
ZD663 E5
ZD664 C5
ZD665 C5

7. Circuit Diagrams and PWB Layouts

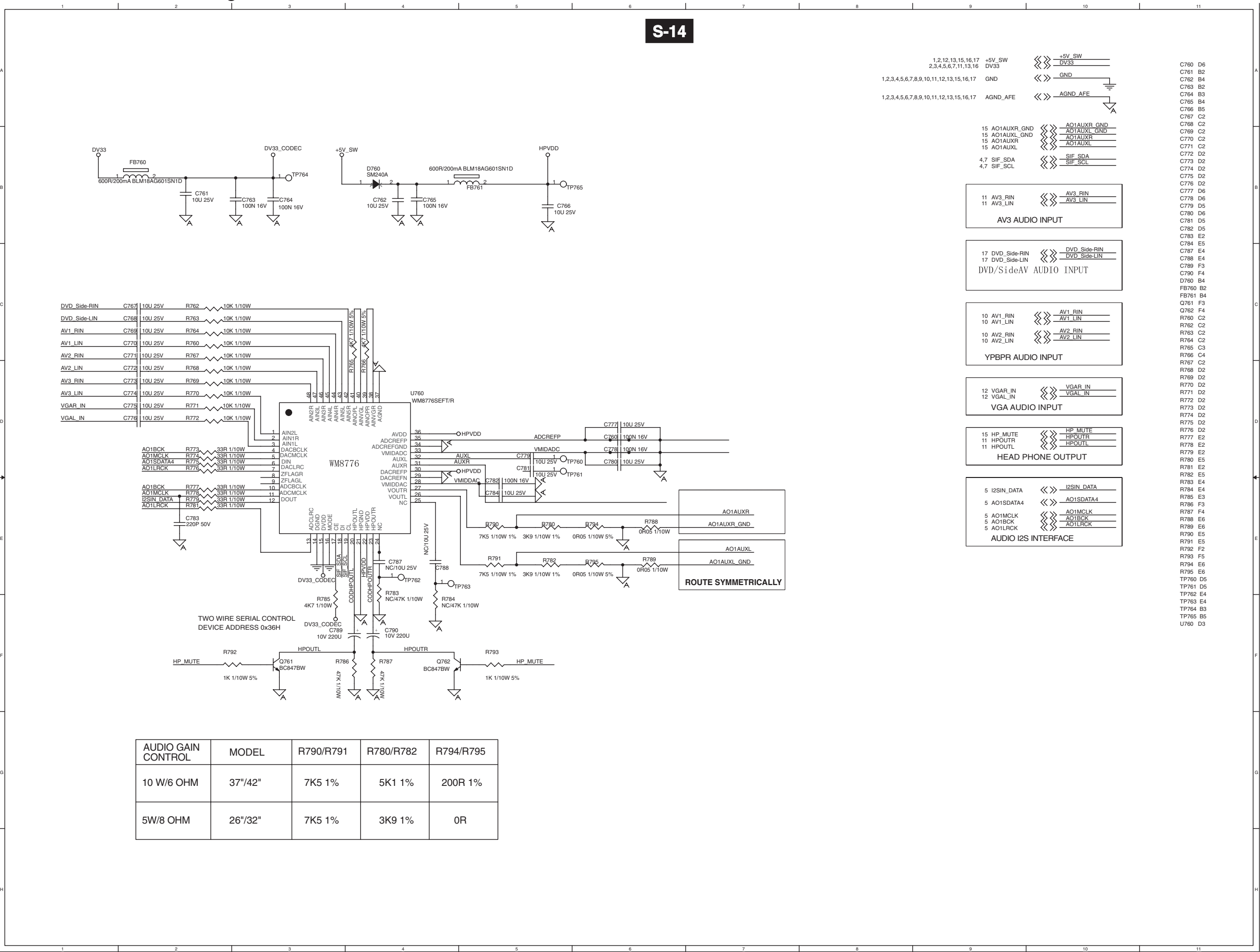
Scaler Board Schematic Diagram-VGA/PC AUDIO INPUT



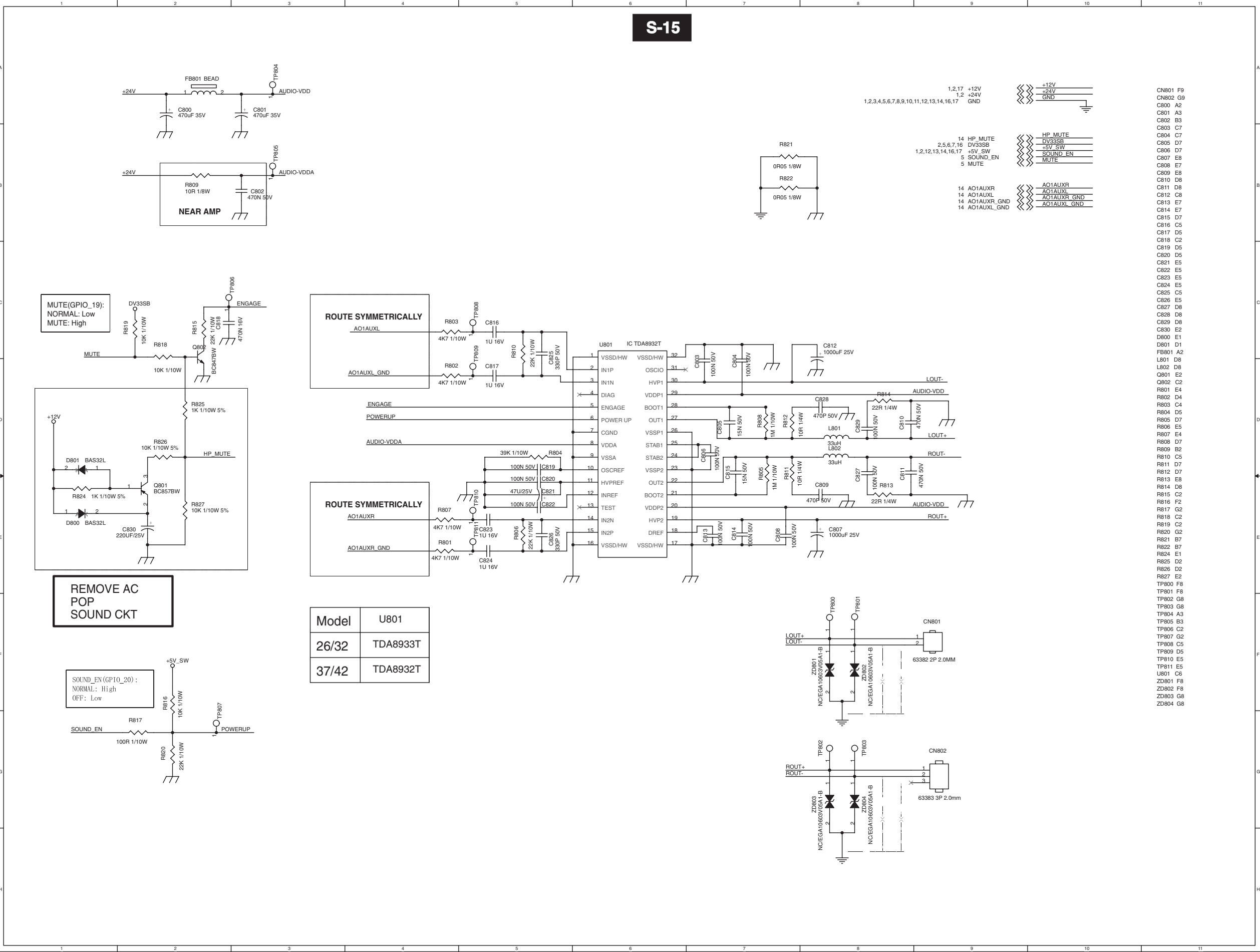
Scaler Board Schematic Diagram-HDMI INPUT



Scaler Board Schematic Diagram-AUDIO CODER

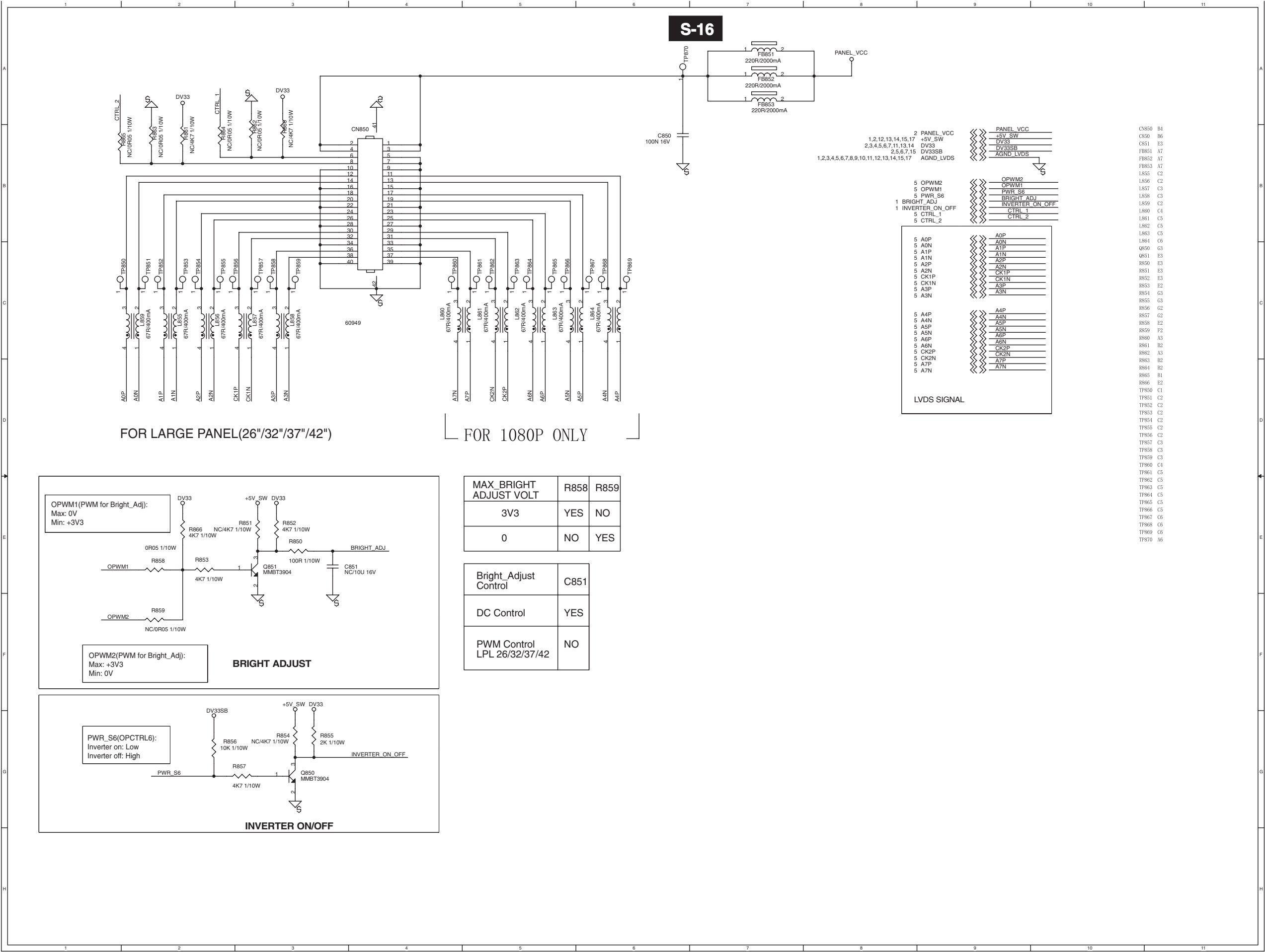


Scaler Board Schematic Diagram-AUDIO AMP

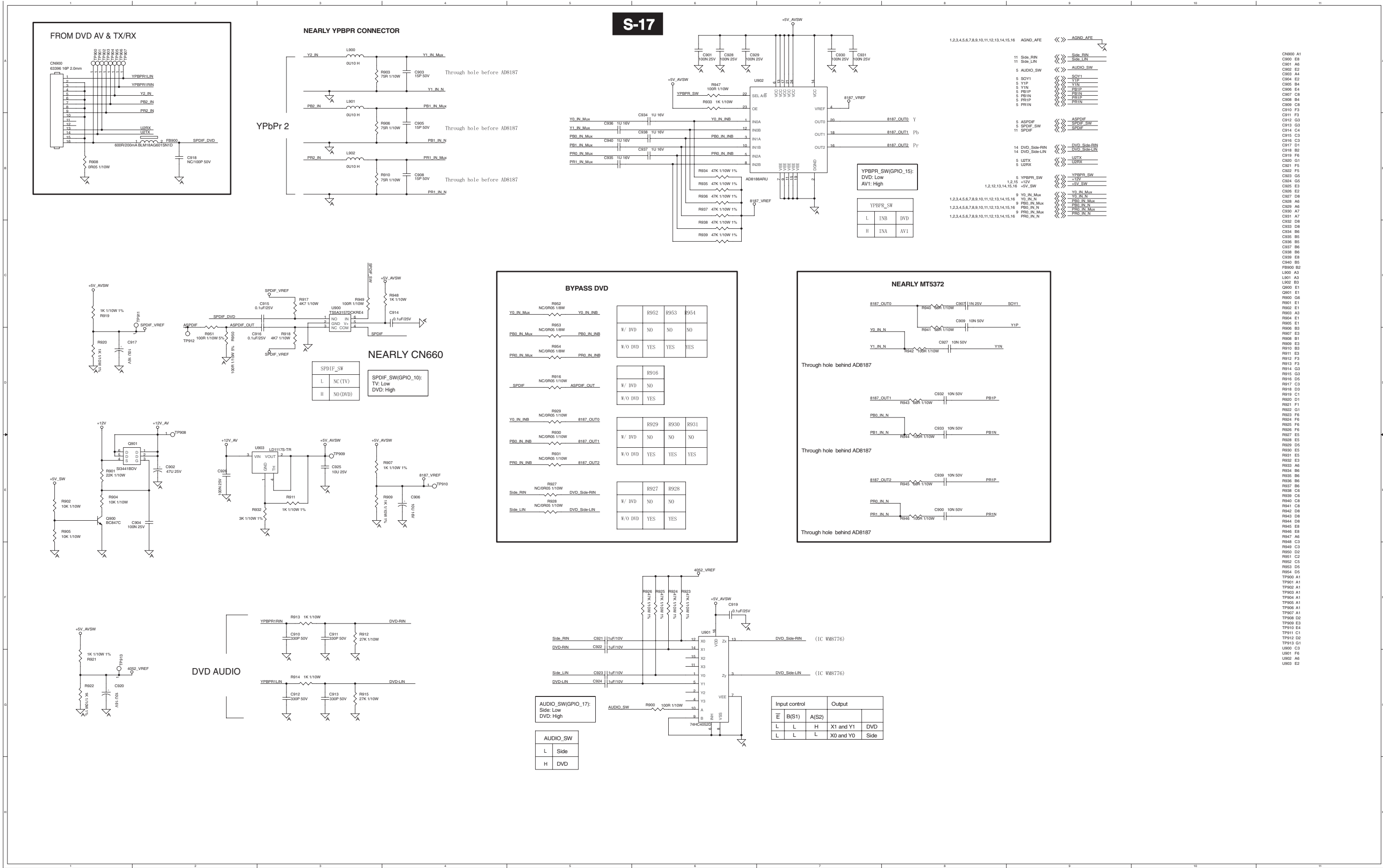


7. Circuit Diagrams and PWB Layouts

Scaler Board Schematic Diagram-LVDS INPUT



Scaler Board Schematic Diagram-DVD Interface



Scaler Board Schematic Diagram-PIN STATUS DEFINITION

S-18

PWR PINS STATUS

PWR	OPWRSB	OPCTRL0	OPCTRL1	OPCTRL2	OPCTRL3	OPCTRL4	OPCTRL5	OPCTRL6	OPCTRL7
Net name	OPWRSB	LED_G	PWR_ON/OFF	MUTE	PWR_S2	STAND_BY	DVD_LED	PWR_S6	LED_A
Function	+5V_SW/+2V6 /+1V2 enable	LED green light drive	POWER key press detect	MUTE enable	Panel_Vcc ON/OFF	Inverter_Vcc ON/OFF	DVD LED green light drive	Inverter ON/OFF	LED amber light drive
Low	Enable <Normal>	Disable <Stand_by>	Yes	Normal	Enable <Normal>	Disable <Stand_by>	Disable <Stand_by>	Enable <Normal>	Enable <Stand_by>
High	Disable <Stand_by>	Enable <Normal>	No	MUTE	Disable <Stand_by>	Enable <Normal>	Enable <Normal>	Disable <Stand_by>	Disable <Normal>

PWM PINS STATUS

PWM	OPWM0	OPWM1	OPWM2
Net name	OPWM0	OPWM1	OPWM2
Function	27MHz Enable	Bright Adj PWM (Max:3V3)	Bright Adj PWM (Max:0V)
Low	Disable <Stand_by>	Max Brightness	Min Brightness
High	Enable <Normal>	Min Brightness	Max Brightness

GPIO PINS STATUS

GPIO	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Net name			HPD_SINK		CTRL_1		CTRL_2	HPDET#		TMDS341_PWR_EN	SPDIF_SW	TMDS341_ENABLE	SVDET1			YPBPR_SW	TMDS341OUT_SEL	AUDIO_SW			
Function	MTS112 RESET	5371 EEPROM write control	HDMI hot plug detect	MENU KEY press detect	Panel pin special setup	PC EEPROM write control	Panel pin special setup	Headphone plug detect	HDMI EEPROM write control	TMDS341 VCC enable	TV/DVD SPDIF switch	TMDS341 output enable	S_VIDEO detect			AV1/DVD YPBPR switch	HDMI_1/HDMI_2 switch	SIDE/DVD audio switch	TS packet error indicator		SOUND_EN
Low	Active	Enable	No	Yes		Enable		No	Enable	Enable	TV	Enable	Yes			DVD	HDMI_2	SIDE			OFF
High	Normal	Disable	Yes	No		Disable		Yes	Disable	Disable	DVD	Disable	No			AV1	HDMI_1	DVD			Normal

IR PINS STATUS

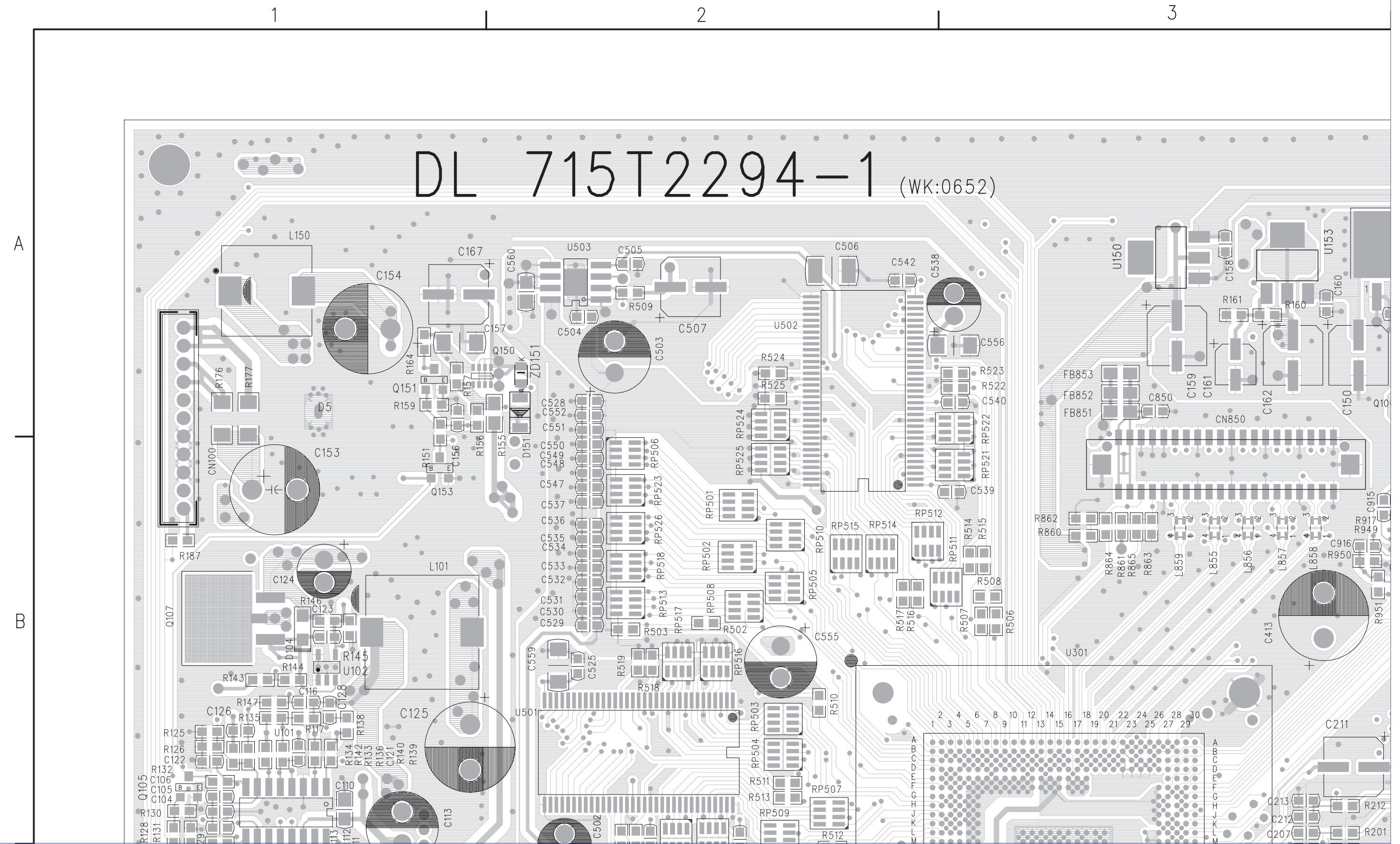
IR	OIRI	OIRO
Net name	RC6	
Function	Remote control RC6 code input	
Low	Disable <Stand_by>	
High	Enable <Normal>	

TPM1.0U LA 39

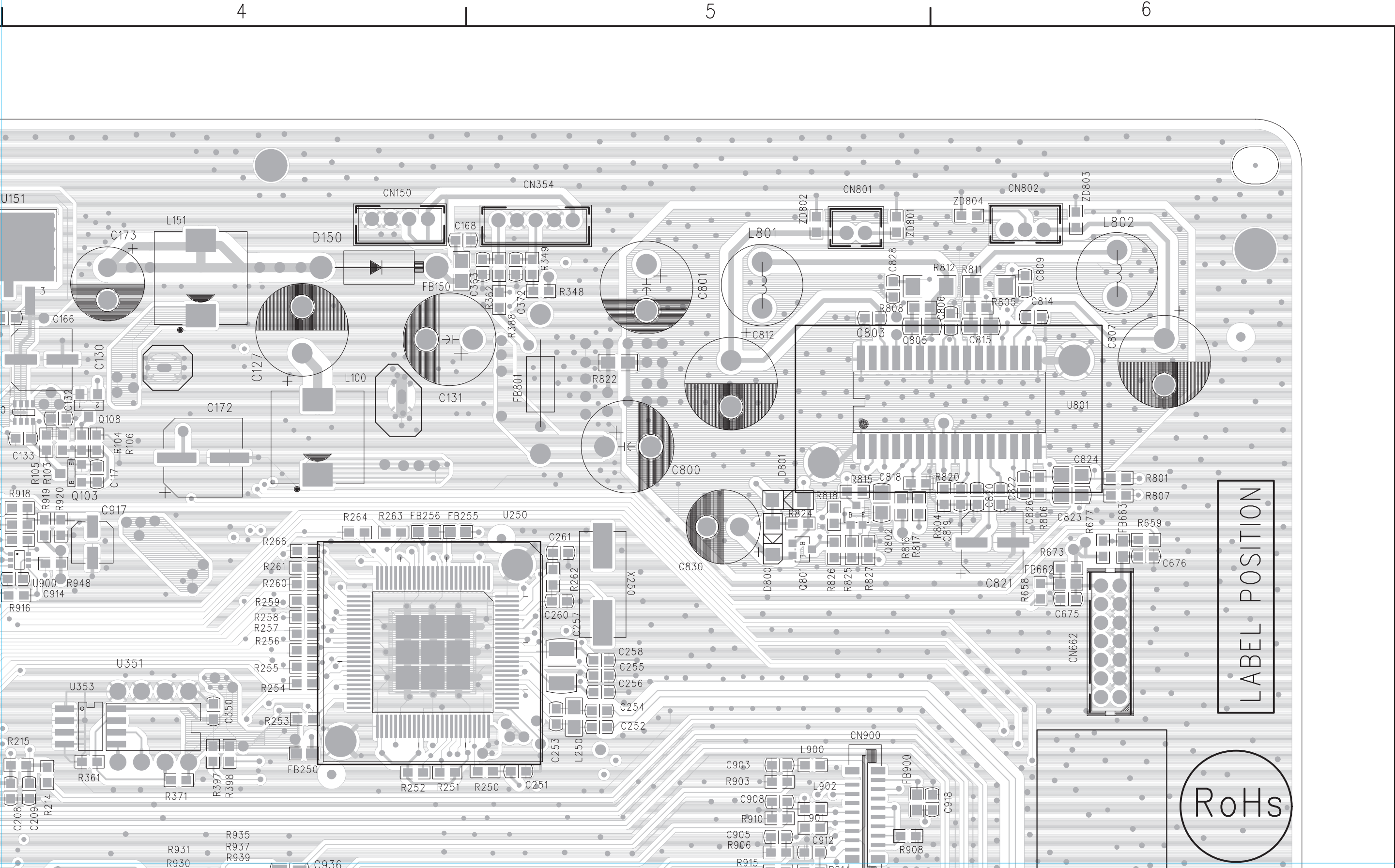
C100	C1	C364	C1	C737	C3	CN601	D4	Q762	B5	R260	B4	R675	C3	R861	B3	RF519	B2
C101	C1	C365	C1	C737	D2	CN410	D45	Q801	B5	R261	B4	R676	C3	R862	B3	RF520	C2
C102	C1	C366	C1	C737	D2	CN410	D45	Q801	B5	R261	B4	R676	C3	R862	B3	RF520	C2
C103	C1	C367	C1	C741	D3	CN611	D46	Q900	R263	B4	R678	D3	R864	B3	RF522	B3	
C104	C1	C368	C1	C741	D3	CN611	D46	Q900	R263	B4	R678	D3	R864	B3	RF522	B3	
C105	B1	C371	C1	C743	D3	CN726	D2	R103	A4	R680	B4	R680	D1	R900	C5	RF524	A2
C106	B1	C372	A5	C744	D2	CN727	D2	R104	A4	R680	A5	R681	D1	R901	D3	RF525	B2
C107	B1	C373	A5	C744	D2	CN727	D2	R104	A4	R680	A5	R681	D1	R901	D3	RF525	B2
C108	C1	C430	C3	C790	C5	CN802	A6	R106	R348	C2	R683	C1	R903	B5	TU201	D6	
C109	C1	C431	C3	C790	C5	CN802	A6	R106	R348	C2	R683	C1	R903	B5	TU201	D6	
C110	B1	C502	C2	C801	A5	CN900	B5	R109	C2	R362	A5	R685	C2	R905	D3	U101	B1
C111	C1	C503	C2	C803	A5	CN700	D2	R109	C2	R371	B4	R686	C1	R906	B5	U102	B1
C112	C1	C504	C2	C803	A5	CN700	D2	R109	C2	R371	B4	R686	C1	R906	B5	U102	B1
C113	C1	C505	A2	C809	A6	D101	C1	R111	C3	R375	D1	R688	C1	R908	B5	U151	A4
C114	C1	C506	A2	C809	A6	D101	C1	R111	C3	R375	D1	R688	C1	R908	B5	U151	A4
C115	C1	C507	A2	C809	A6	D101	C1	R111	C3	R375	D1	R688	C1	R908	B5	U151	A4
C117	B4	S007	A2	C809	A6	D103	C2	R113	C1	R379	C1	R690	C2	R911	A4	U154	C3
C118	C1	C507	A2	C809	A6	D103	C2	R113	C1	R379	C1	R690	C2	R911	A4	U154	C3
C122	B1	C519	B2	C814	A6	D150	A4	R115	C1	R381	C1	R692	C3	R913	C5	U301	C3
C123	B1	C520	B2	C815	A6	D151	A4	R116	C1	R382	C1	R693	C1	R914	C5	U350	C2
C124	B1	C521	B2	C815	A6	D151	A4	R116	C1	R382	C1	R693	C1	R914	C5	U350	C2
C125	B1	C522	B2	C819	B6	D725	D2	R118	C1	R385	C1	R699	C2	R916	B4	U353	B4
C126	B1	C523	B2	C819	B6	D725	D2	R118	C1	R385	C1	R699	C2	R916	B4	U353	B4
C127	A4	C531	B32	C821	B6	0800	B5	R120	C1	R387	C1	R709	C1	R918	B4	U502	A2
C128	B1	C532	B2	C822	B6	D801	B5	R121	C1	R388	A5	R712	C1	R919	B4	U503	A2
C129	B1	C533	B2	C822	B6	D801	B5	R121	C1	R388	A5	R712	C1	R919	B4	U503	A2
C131	A4	C534	B2	C824	B6	0801	D5	R123	C1	R395	C1	R714	D2	R921	B5	U703	C1
C132	A4	C535	B2	C824	B6	0801	D5	R123	C1	R395	C1	R714	D2	R921	B5	U703	C1
C133	A4	C536	B2	C828	A5	FB203	C2	R126	B1	R397	B4	R725	D2	R923	B5	U900	B4
C150	A3	C537	B2	C830	A5	FB250	A4	R127	C1	R398	B4	R726	C3	R924	B5	U901	D5
C151	A3	C538	B2	C830	A5	FB250	A4	R127	C1	R398	B4	R726	C3	R924	B5	U901	D5
C153	B1	C539	A3	C900	C3	FB256	B4	R129	B1	R502	B2	R728	D2	R926	B5	U903	D4
C154	B1	C540	A3	C900	C3	FB256	B4	R129	B1	R502	B2	R728	D2	R926	B5	U903	D4
C155	C2	C542	B2	C902	C3	FB266	B6	R131	B1	R504	C2	R730	D2	R928	B5	X350	C3
C156	A1	C547	B2	C904	D3	FB703	C2	R133	B1	R506	B3	R732	C3	R930	B5	U1515	A2
C157	A1	C548	B2	C904	D3	FB703	C2	R133	B1	R506	B3	R732	C3	R930	B5	U1515	A2
C162	A3	C555	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C163	A3	C556	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C164	A3	C557	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C165	A3	C558	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C166	A3	C559	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C167	A3	C560	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C168	A3	C561	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C169	A3	C562	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C170	A3	C563	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C171	A3	C564	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C172	A3	C565	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C173	A3	C566	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C174	A3	C567	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C175	A3	C568	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C176	A3	C569	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C177	A3	C570	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C178	A3	C571	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C179	A3	C572	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C180	A3	C573	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C181	A3	C574	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C182	A3	C575	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C183	A3	C576	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C184	A3	C577	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C185	A3	C578	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C186	A3	C579	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C187	A3	C580	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C188	A3	C581	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C189	A3	C582	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C190	A3	C583	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C191	A3	C584	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C192	A3	C585	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C193	A3	C586	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C194	A3	C587	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C195	A3	C588	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C196	A3	C589	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C197	A3	C590	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C198	A3	C591	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C199	A3	C592	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C200	A3	C593	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C201	A3	C594	B2	C905	B5	FB801	B5	R134	B1	R507	B3	R733	D2	R931	C5	ZB602	D4
C202	B5	C610	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C203	B5	C611	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C204	B5	C612	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C205	B5	C613	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C206	B5	C614	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C207	B5	C615	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C208	B5	C616	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C209	B5	C617	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C210	B5	C618	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C211	B5	C619	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C212	B5	C620	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C213	B5	C621	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C214	B5	C622	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C215	B5	C623	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C216	B5	C624	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C217	B5	C625	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C218	B5	C626	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C219	B5	C627	C3	C919	D5	L604	D4	R151	B1	R521	C2	R752	D2	R945	C3	ZB696	D1
C220	B5																

7. Circuit Diagrams and PWB Layouts

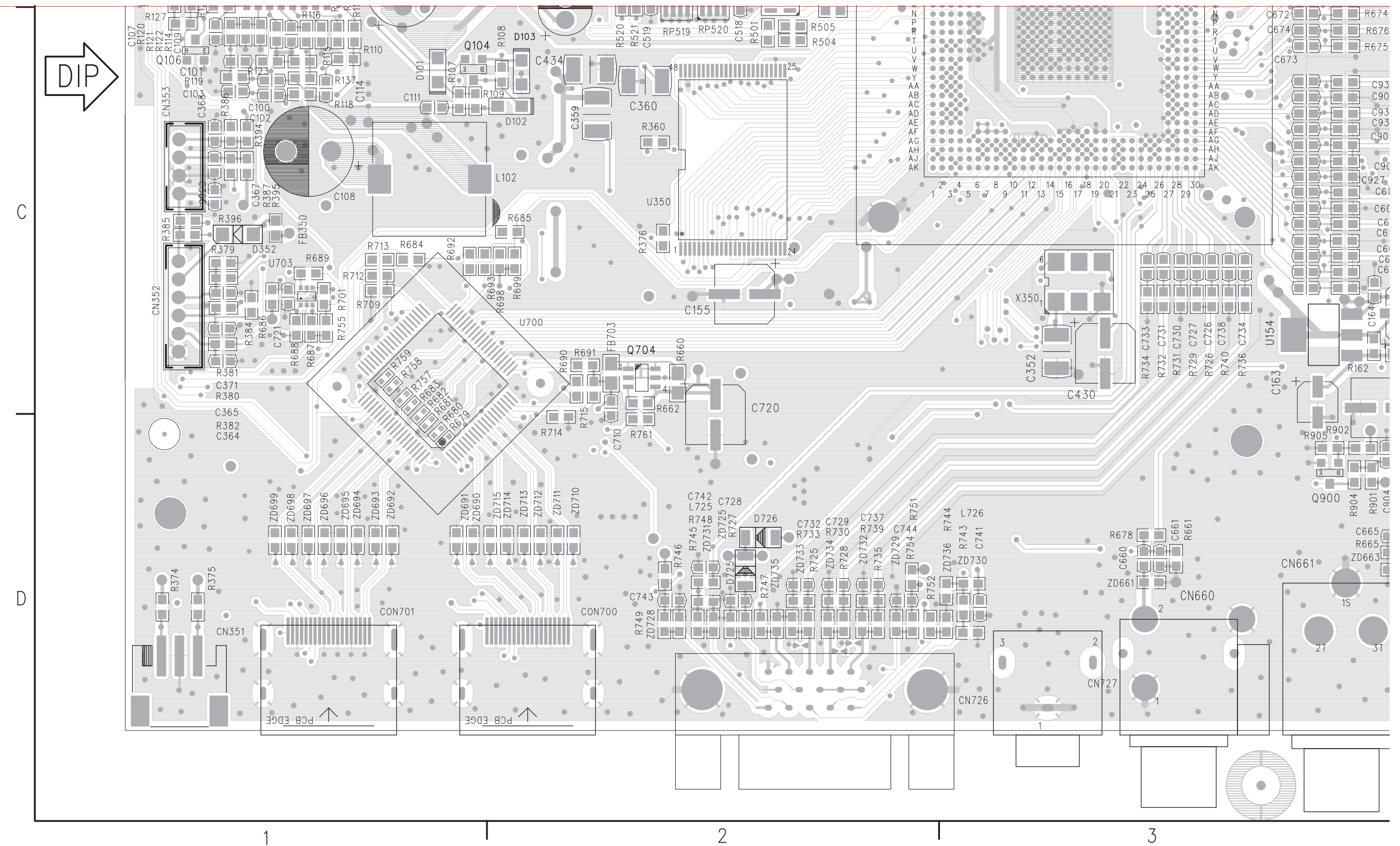
Scaler Board Layout-(TOP LEFT)



Printer Board Layout(TOP RIGHT)



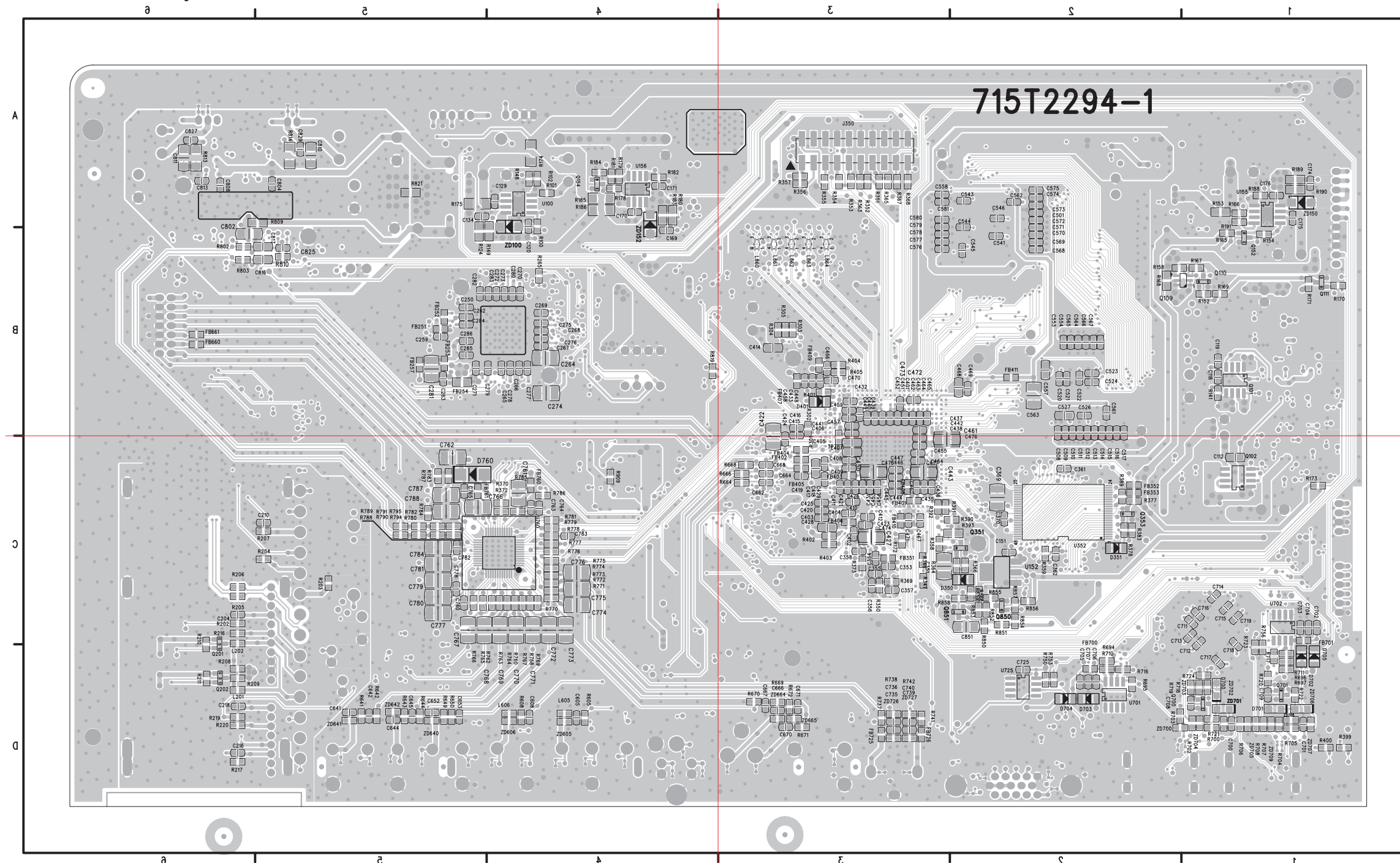
Scaler Board Layout-(BOTTOM LEFT)



[illegible]

7. Circuit Diagrams and PWB Layouts

Scaler Board Layout-2



C112	C1	C414	B3	C512	C2	C709	D1	B254	B5	R172	C3	R399	D1	R776	C4
C118	B1	C415	B3	C513	C2	C711	C1	B255	B5	R173	C1	R400	D1	R777	C4
C119	B1	C416	B3	C514	C2	C712	D1	B351	C3	R174	A4	R401	B3	R778	C4
C120	A4	C417	C3	C515	C2	C713	C1	B352	C2	R175	A5	R402	C3	R779	C4
C121	A4	C418	C3	C516	C2	C714	C1	B353	C2	R176	A4	R403	B3	R780	C5
C119	A5	C419	C3	C517	C2	C715	C1	B401	C3	R177	A4	R404	B3	R781	C5
C125	D2	C420	C3	C520	B2	C716	C1	B402	C3	R180	A4	R405	B3	R782	C5
C169	A4	C421	C3	C521	B2	C717	D1	B403	C3	R181	A4	R605	D4	R783	C5
C170	A4	C422	C3	C522	B2	C718	D1	B404	C3	R182	A4	R606	D4	R784	C5
C171	A4	C423	C3	C523	B2	C719	D1	B405	C3	R183	A4	R607	D4	R785	C5
C174	A1	C424	C3	C524	B2	C725	D2	B406	C3	R184	A4	R642	D5	R786	C4
C175	A1	C425	C3	C526	B2	C735	D3	B407	B3	R185	A4	R643	D5	R787	C5
C176	A1	C426	C3	C527	B2	C736	D3	B408	C3	R186	A4	R644	D5	R788	C5
C200	C6	C427	C3	C531	B2	C739	D3	B409	B3	R188	A1	R649	D5	R789	C5
C210	C6	C428	C3	C532	B2	C740	D3	B410	B3	R189	A1	R650	D5	R790	C5
C216	D6	C429	C3	C544	B2	C760	C5	B411	B2	R190	A1	R664	C3	R791	C5
C218	D6	C431	C3	C545	B2	C761	C4	B660	B6	R191	A1	R666	C3	R794	C5
C230	B5	C432	B3	C546	A2	C762	C5	B661	B6	R202	C6	R668	C3	R795	C5
C239	B5	C433	B3	C553	B2	C763	C4	B707	D2	R203	C5	R669	D3	R800	B6
C243	B5	C435	B3	C554	B2	C764	C4	B708	D2	R204	C6	R670	D3	R803	B6
C263	B5	C436	C3	C557	B2	C765	C5	B725	D3	R205	C6	R671	D3	R809	A5
C264	B4	C437	B3	C558	A3	C766	C5	B726	D3	R206	C6	R672	D3	R810	B5
C265	B4	C438	C3	C561	B2	C767	C5	B760	C4	R207	C5	R694	D2	R813	A6
C266	B4	C439	C3	C562	B2	C768	C5	B761	C4	R208	C6	R695	D2	R814	A6
C267	B4	C440	B3	C563	B2	C769	C4	J350	A3	R209	D6	R696	D1	R819	B4
C268	B4	C441	B3	C564	B2	C770	C4	L201	D6	R210	C6	R697	D1	R821	A5
C269	B4	C442	C3	C565	B2	C771	C4	L202	C6	R211	D6	R700	D1	R850	C2
C270	B4	C443	C3	C566	B2	C772	C4	L605	D4	R216	C6	R702	D1	R851	D2
C271	B4	C444	C3	C567	B2	C773	C4	L606	D4	R217	C6	R703	D1	R852	D2
C272	B4	C445	C3	C568	B2	C774	C4	L860	B3	R219	D6	R704	D1	R853	C2
C273	B4	C446	C3	C569	B2	C775	C4	L861	B3	R220	D6	R705	D1	R854	C2
C274	B4	C447	C3	C570	B2	C776	C4	L862	B3	R265	B4	R706	D1	R855	C2
C275	B4	C448	C3	C571	B2	C777	C5	L863	B3	R301	C3	R707	D1	R856	C2
C276	B4	C449	C3	C572	B2	C778	C5	L864	B3	R302	C3	R708	D1	R857	C2
C277	B4	C450	C3	C573	A2	C779	C5	Q101	B1	R303	B3	R710	D2	R858	C2
C278	B4	C451	B3	C5											

Scaler Board Layout-2(TOP LEFT)

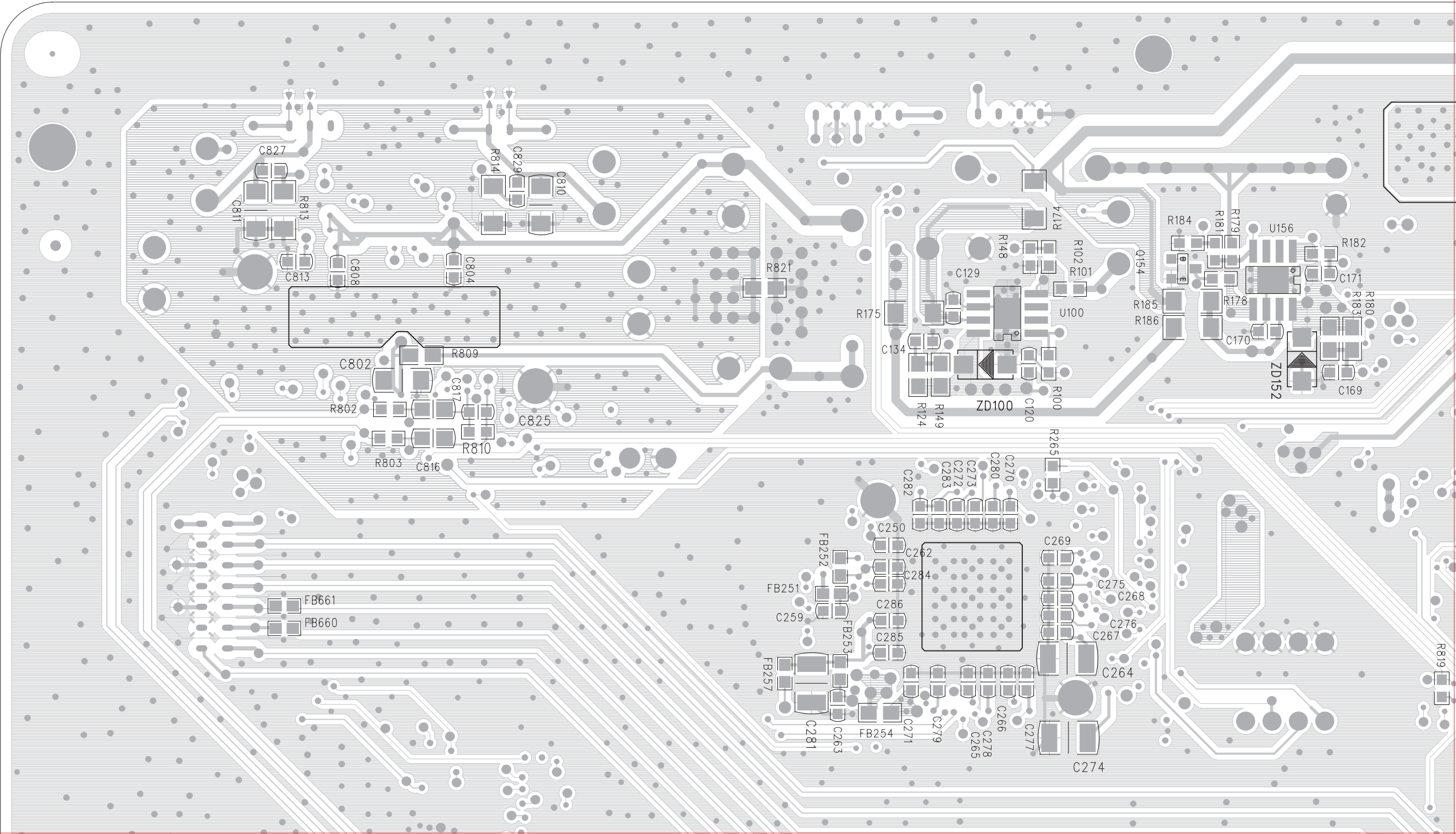
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2

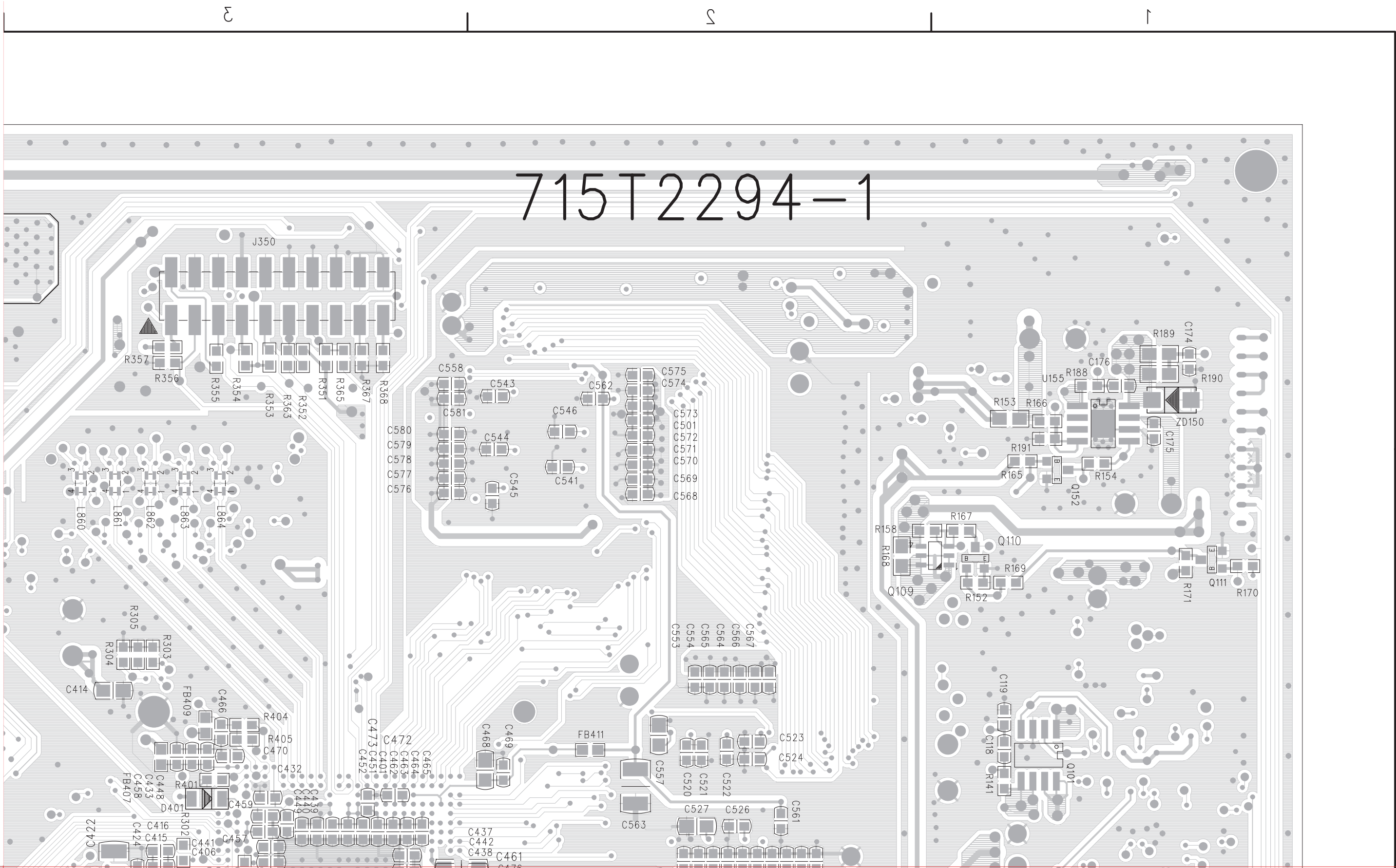
4

A

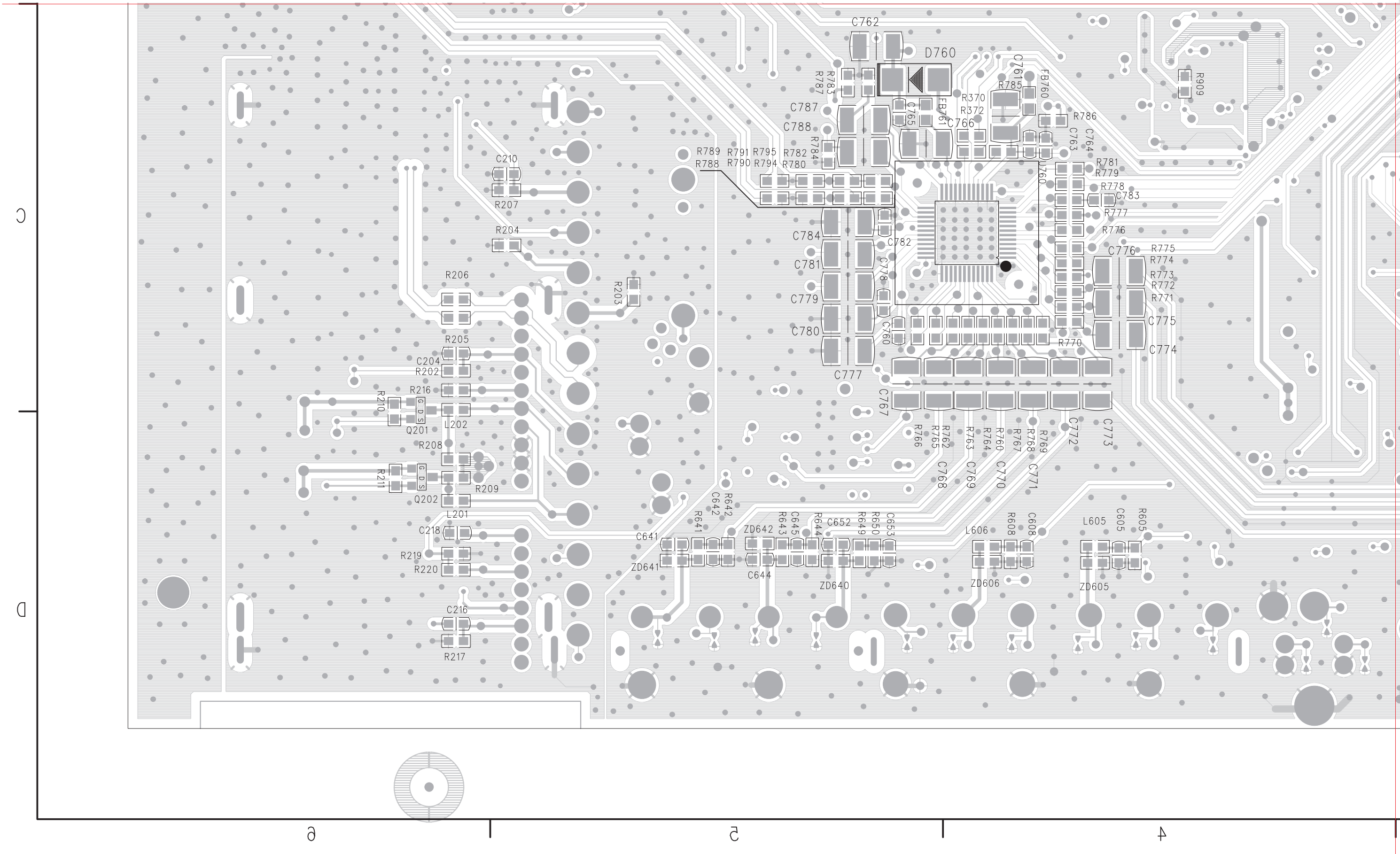
B



Scaler Board Layout-2(TOP RIGHT)

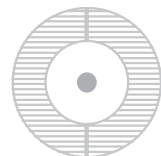
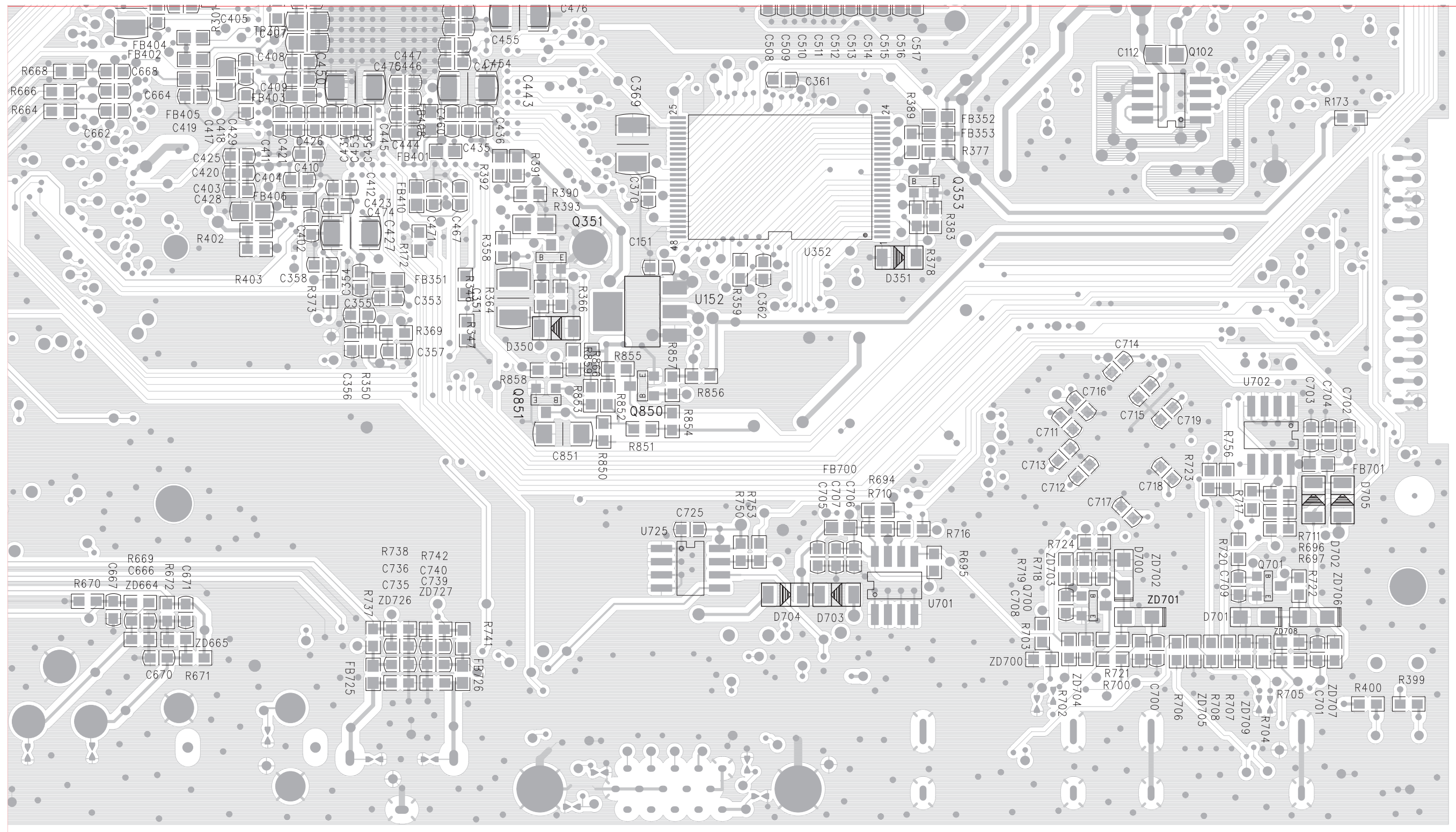


Scaler Board Layout-2(BUTTOM LEFT)



7. Circuit Diagrams and PWB Layouts

Scaler Board Layout-2(BOTTOM RIGHT)

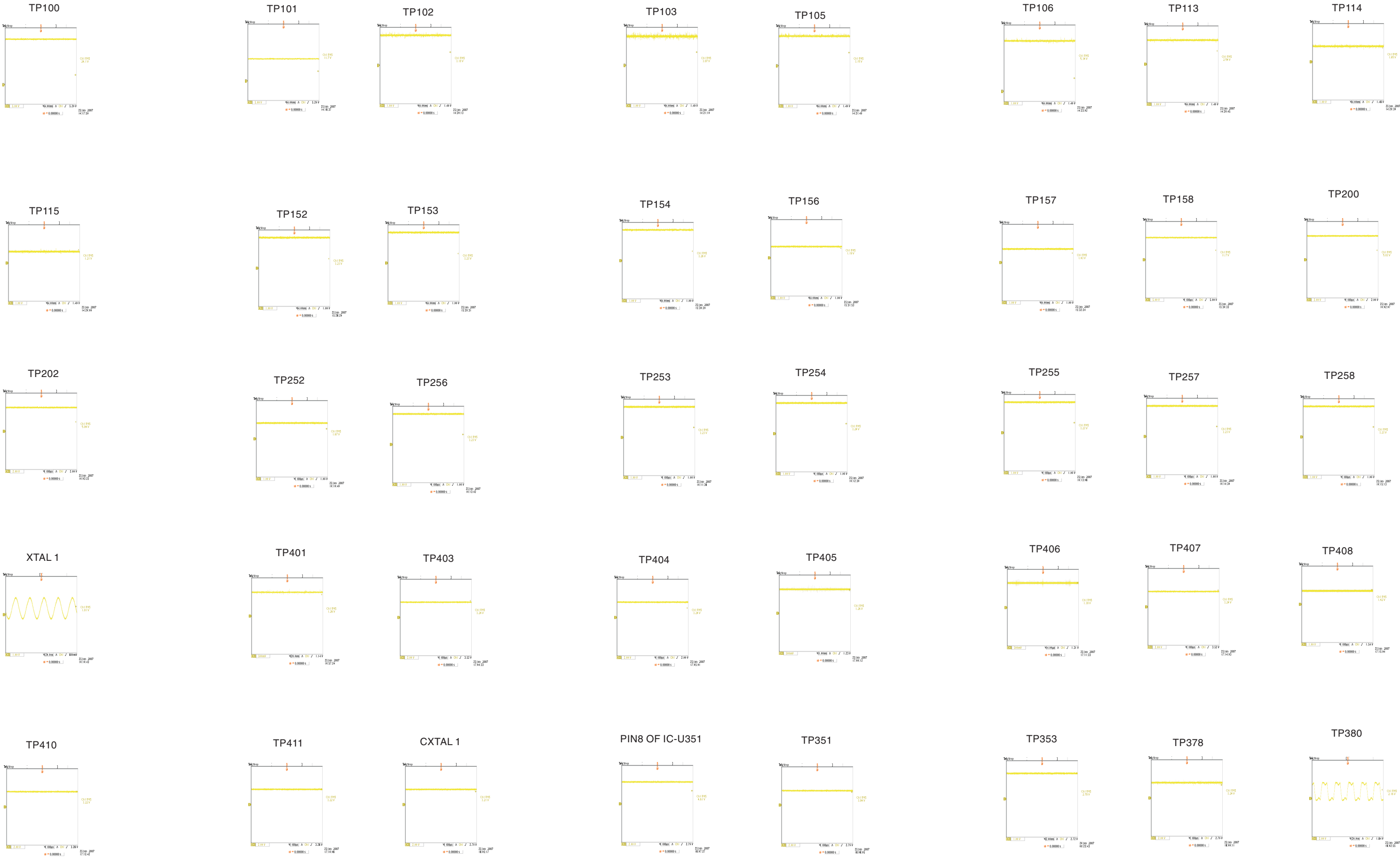


3

5

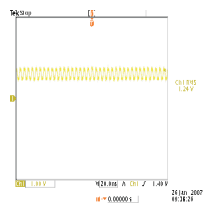
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Test Point

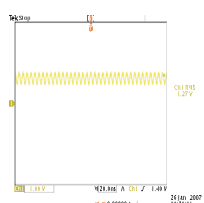


7. Circuit Diagrams and PWB Layouts

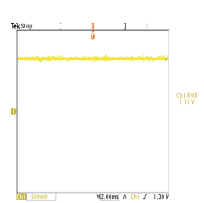
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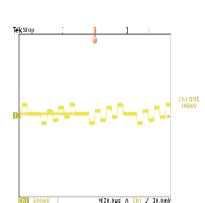
MEM_CLKB



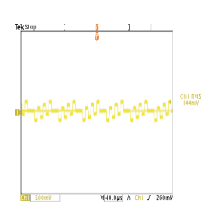
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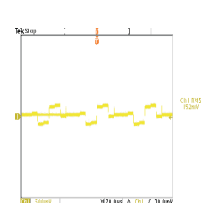
PB0_IN



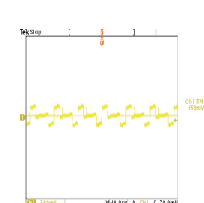
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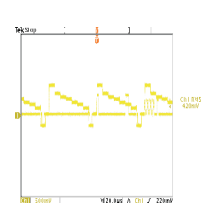
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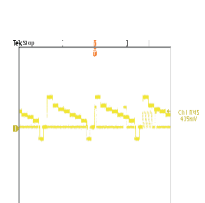
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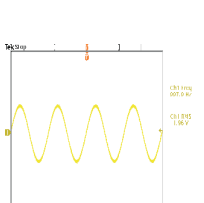
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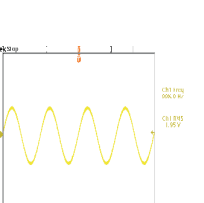
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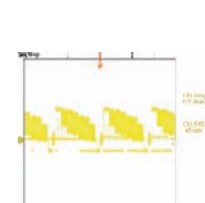
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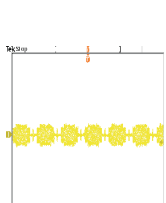
AV2_LIN



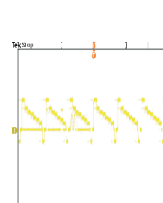
AV3_CVBS_IN



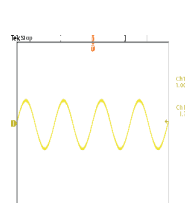
AV3_SC_IN



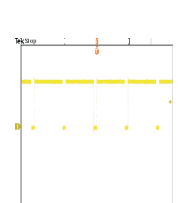
AV3_SY_IN



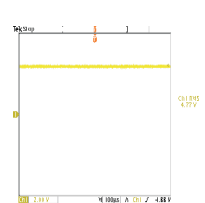
AV3_AUDIO-IN



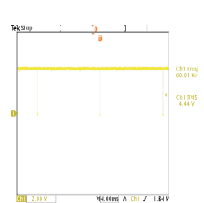
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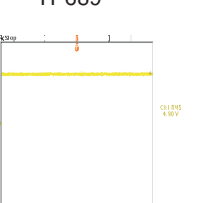
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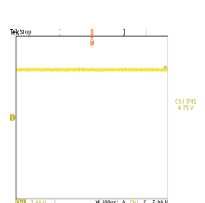
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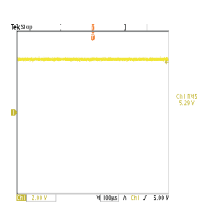
TP689



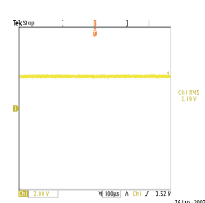
TP694



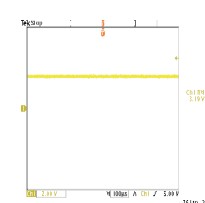
TP699



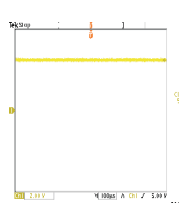
TP764



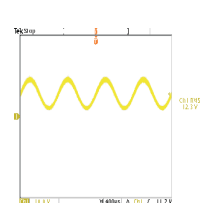
TP701



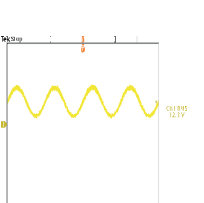
TP765



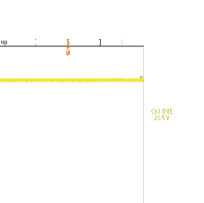
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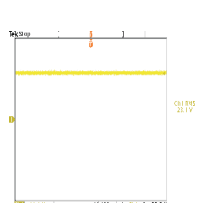
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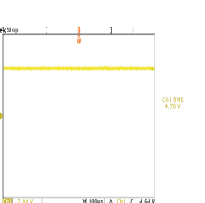
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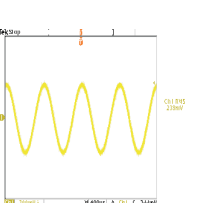
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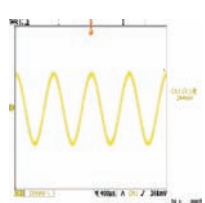
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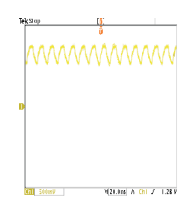
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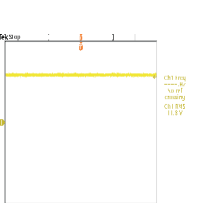
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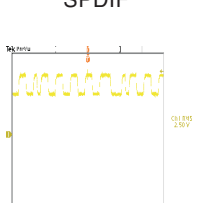
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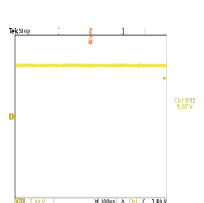
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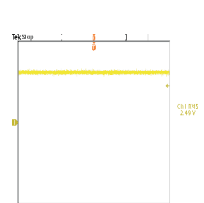
SPDIF



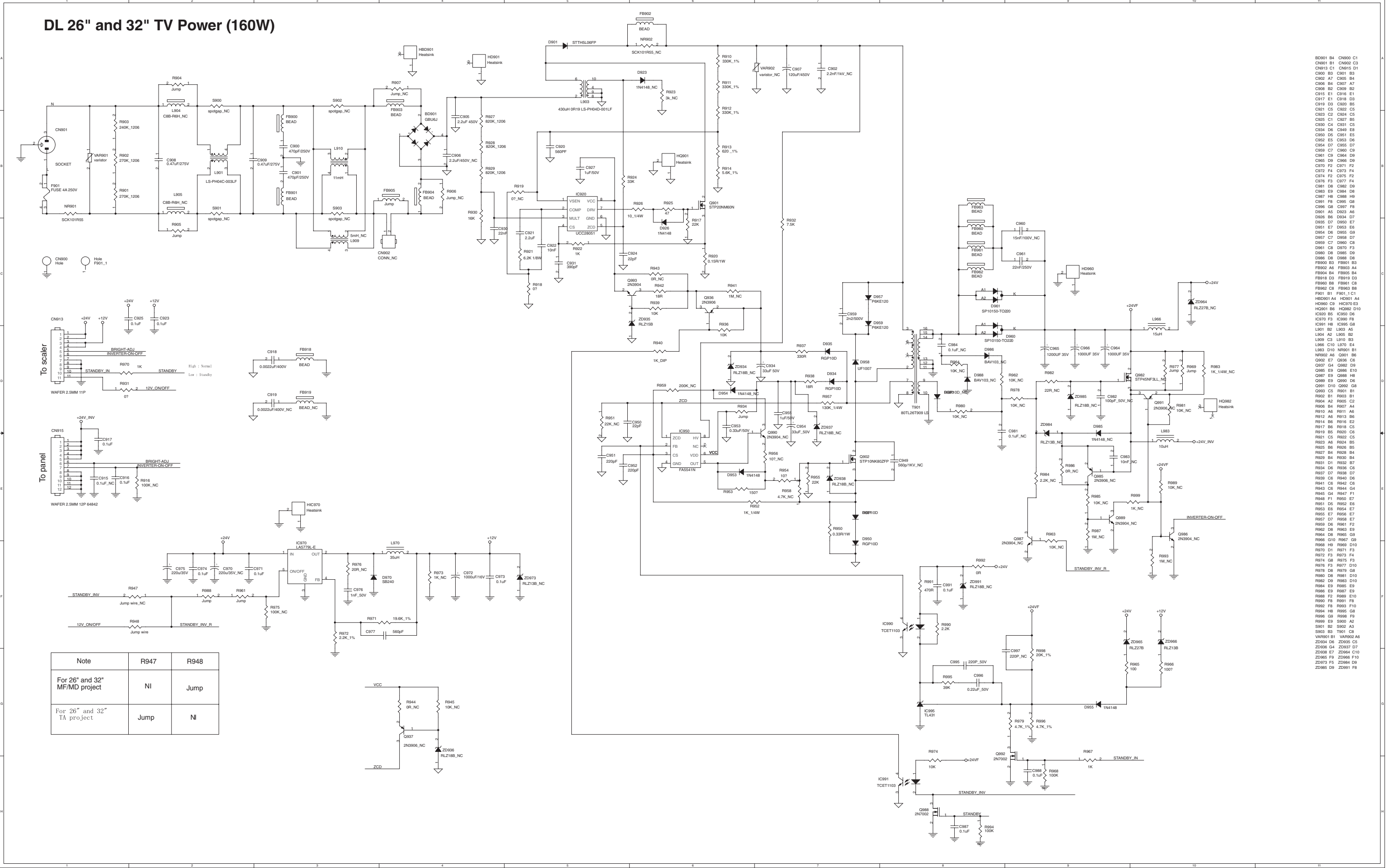
TP909



TP910

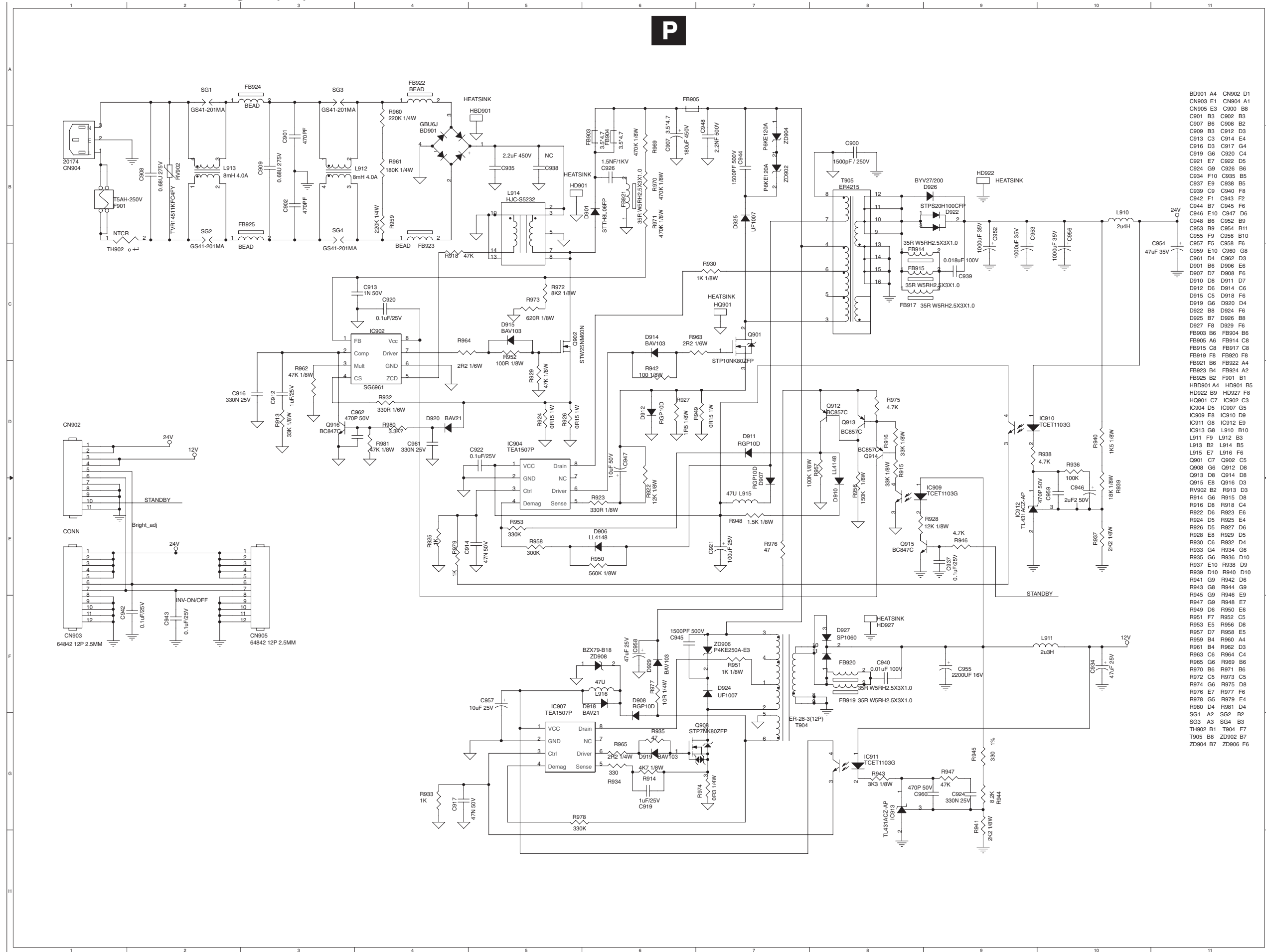


Power Board Schematic Diagram(26" 32")

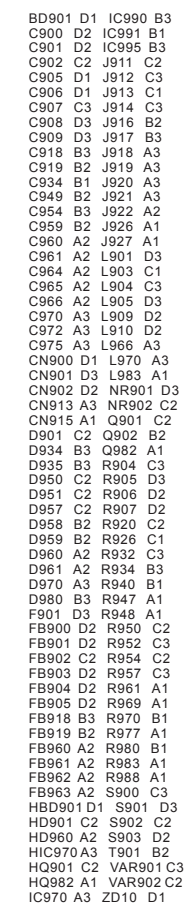


7. Circuit Diagrams and PWB Layouts

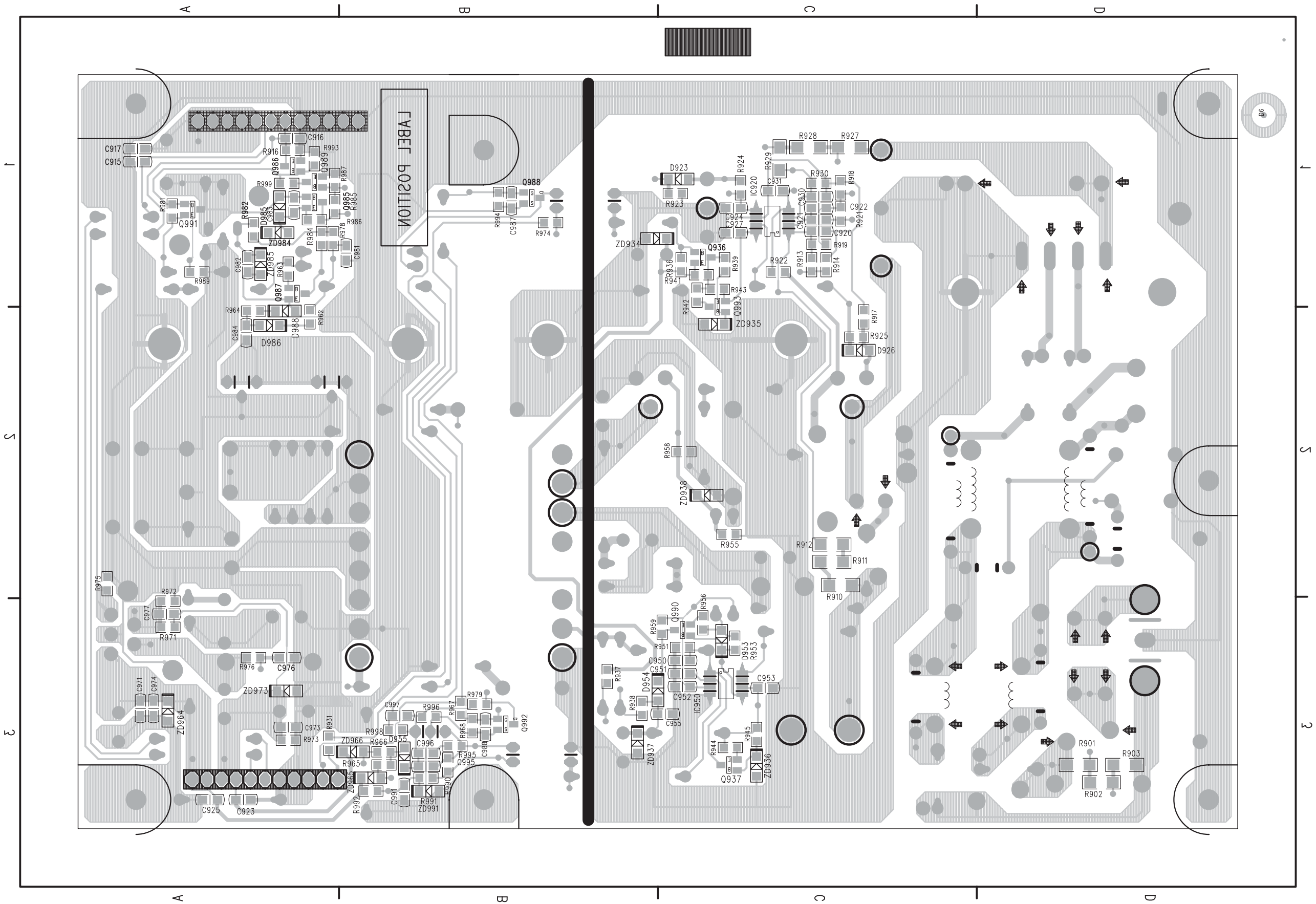
Power Board Schematic Diagram(37")



Power Board layout(26",32")



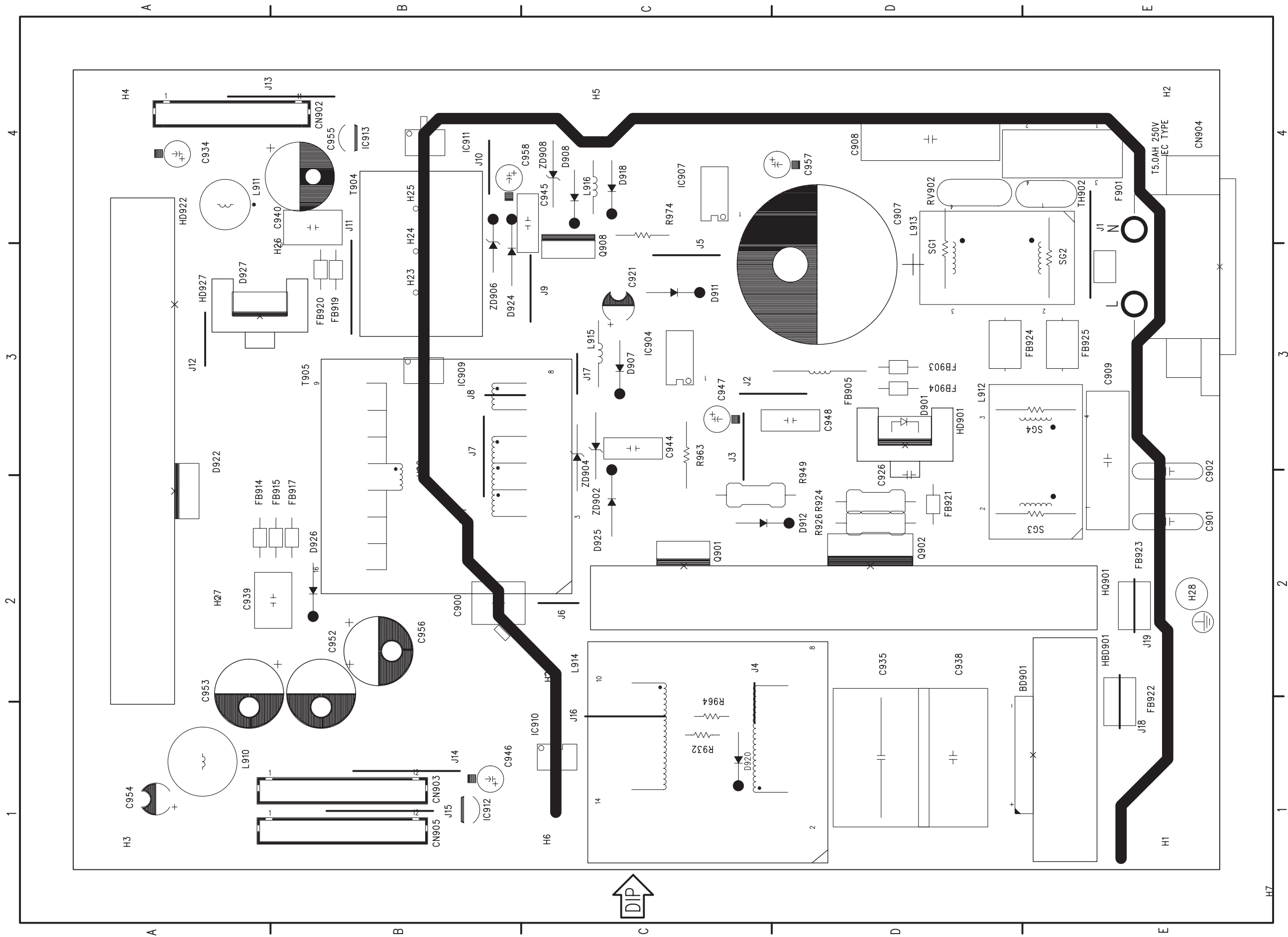
Power Board Layout(26",32")-1



C915	A1	R922	C1
C916	A1	R923	C1
C917	A1	R924	C1
C920	C1	R925	C2
C921	C1	R927	C1
C922	C1	R928	C1
C923	A3	R929	C1
C924	C1	R930	C1
C925	A3	R931	A3
C927	C1	R936	C1
C930	C1	R937	B3
C931	C1	R938	B3
C950	C3	R939	C1
C951	C3	R941	C1
C952	C3	R942	C1
C953	C3	R943	C1
C955	C3	R944	C3
C971	A3	R945	C3
C973	A3	R951	C3
C974	A3	R953	C3
C976	A3	R955	C2
C977	A3	R956	C3
C981	B1	R958	C2
C982	A1	R959	C3
C983	A1	R962	A2
C984	A2	R963	A1
C987	B1	R964	A2
C988	B3	R965	B3
C991	B3	R966	B3
C995	B3	R967	B3
C996	B3	R968	B3
C997	B3	R971	A3
D923	C1	R972	A3
D926	C2	R973	A3
D953	C3	R974	B1
D954	B3	R975	A2
D955	B3	R976	A3
D985	A1	R978	A1
D986	A2	R979	B3
D988	A2	R981	A1
IC920	C1	R982	A1
IC950	C3	R984	A1
Q936	C1	R985	A1
Q937	C3	R986	A1
Q985	A1	R987	A1
Q986	A1	R989	A1
Q987	A1	R990	B3
Q988	B1	R991	B3
Q989	A1	R992	B3
Q990	C3	R993	A1
Q991	A1	R994	B1
Q992	B3	R995	B3
Q993	C2	R996	B3
R901	D3	R998	B3
R902	D3	R999	A1
R903	D3	ZD934	B1
R910	C2	ZD935	C2
R911	C2	ZD936	C3
R912	C2	ZD937	B3
R913	C1	ZD938	C2
R914	C1	ZD964	A3
R916	A1	ZD965	B3
R917	C2	ZD966	B3
R918	C1	ZD973	A3
R919	C1	ZD984	A1
R921	C1	ZD985	A1
Zd991	B3		

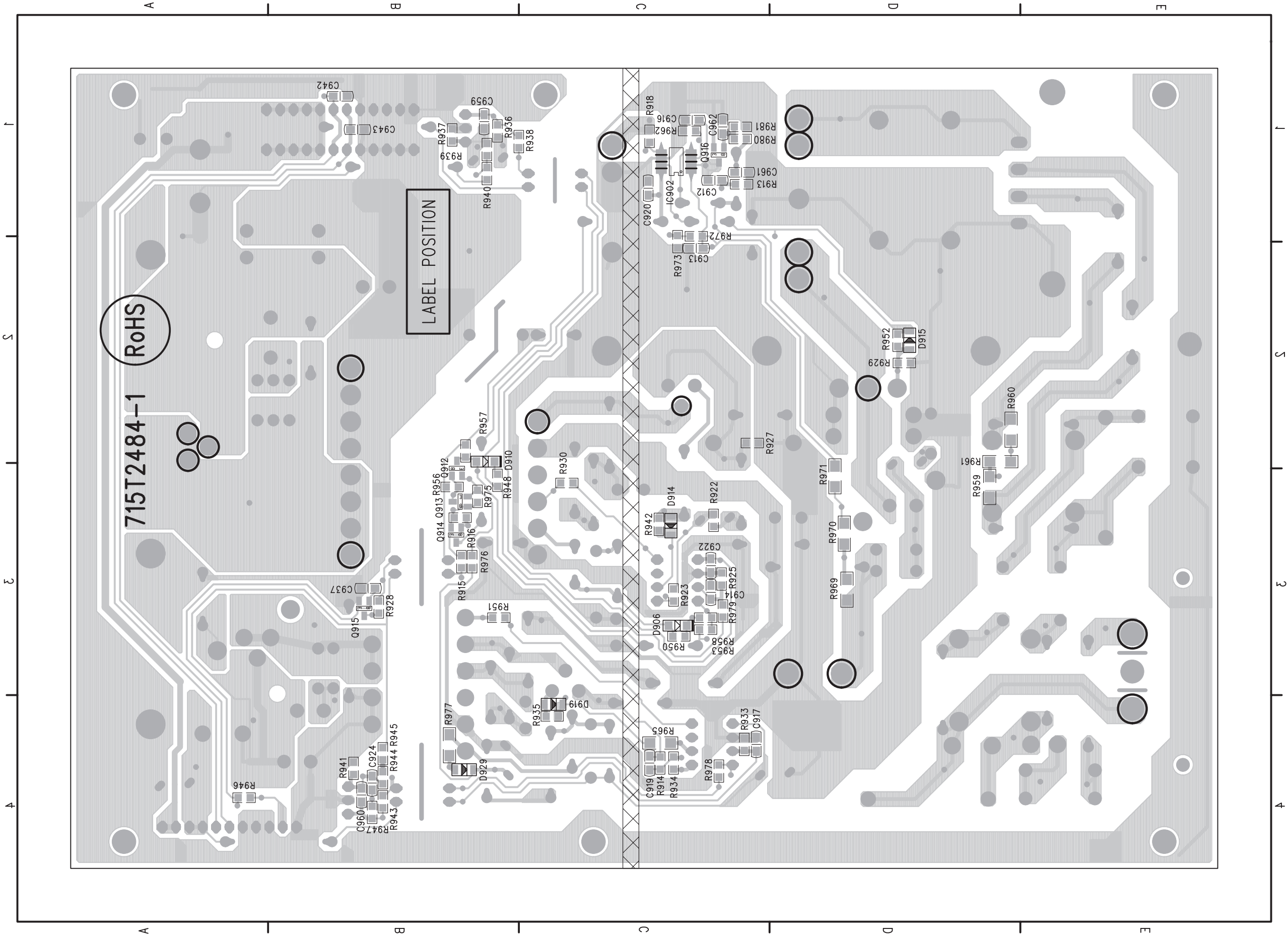
7. Circuit Diagrams and PWB Layouts

Power Board Layout(37")



- BD901 D1 FB915 B2
- C900 B2 FB917 B2
- C901 E2 FB919 B3
- C902 E2 FB920 B3
- C907 D3 FB921 D2
- C908 D4 FB922 E2
- C909 E3 FB923 E2
- C921 C3 FB924 D3
- C926 D2 FB925 E3
- C934 A4 HBD901 E1
- C935 D1 HD901 D3
- C938 D1 HD922 A3
- C939 B2 HD927 A3
- C940 B4 HQ901 D2
- C944 C3 IC904 C3
- C945 C4 IC907 C4
- C946 B1 IC909 B3
- C947 C3 IC910 C1
- C948 D3 IC911 B4
- C952 B2 IC912 B1
- C953 A2 IC913 B4
- C954 A1 L910 A1
- C955 B4 L911 A4
- C956 B2 L912 E3
- C957 D4 L913 D3
- C958 B4 L914 C1
- CN902 A4 L915 C3
- CN903 A1 L916 C4
- CN904 E3 Q901 C2
- CN905 A1 Q902 D2
- D901 D3 Q908 C3
- D907 C3 R924 D2
- D908 C4 R926 D2
- D911 C3 R932 C1
- D912 D2 R949 C2
- D918 C4 R963 C3
- D920 C1 R964 C1
- D922 A2 R974 C4
- D924 B4 RV902 D4
- D925 C3 T904 B3
- D926 B2 T905 B2
- D927 A3 TH902 E4
- F901 E4 ZD902 C2
- FB903 D3 ZD904 C3
- FB904 D3 ZD906 B4
- FB905 D3 ZD908 C4
- FB914 A2

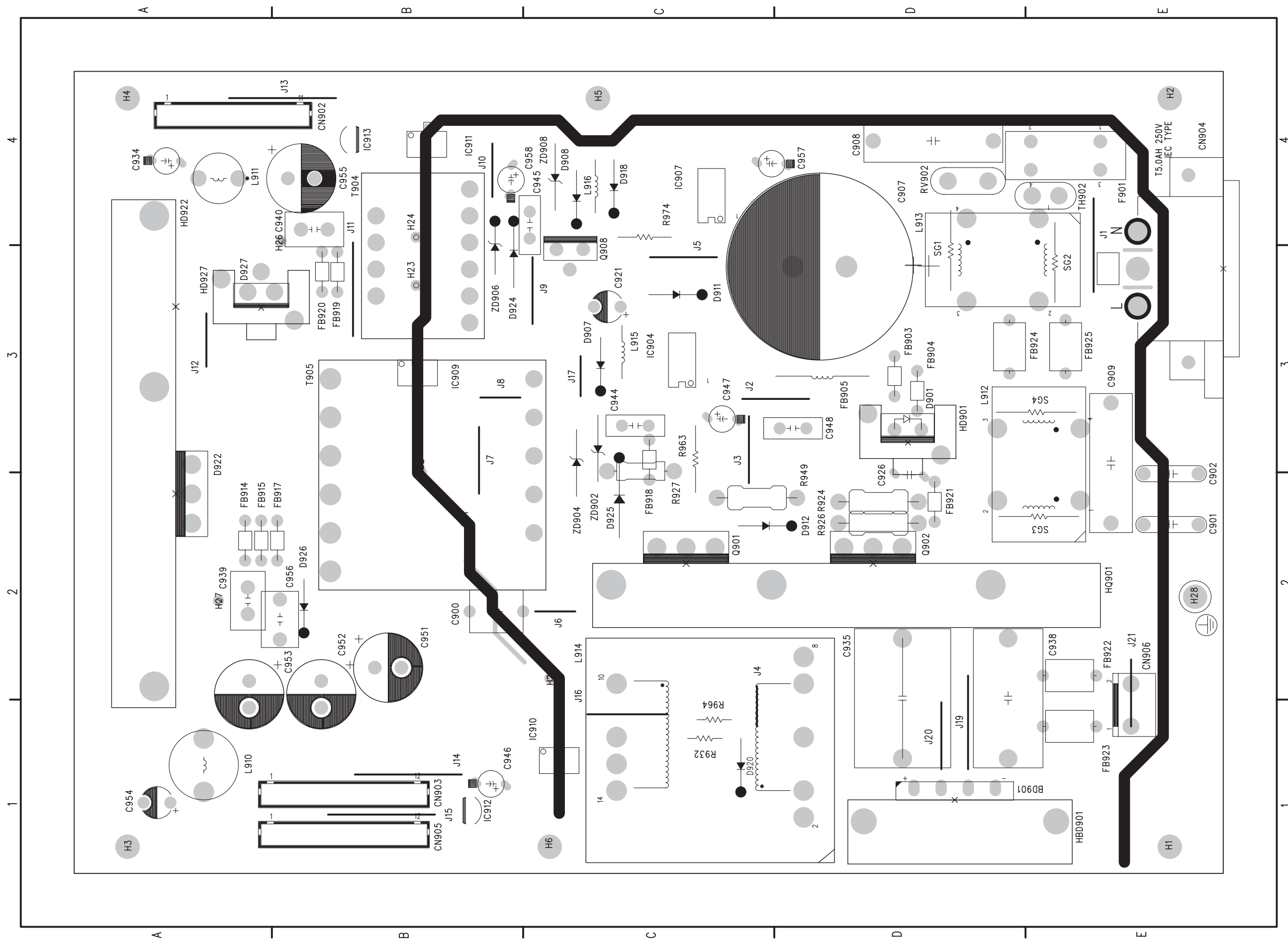
Power Board Layout(37")-1



C912	C1	R933	C4
C913	C2	R934	C4
C914	C3	R935	C4
C916	C1	R936	B1
C917	C4	R937	B1
C919	C4	R938	B1
C920	C1	R939	B1
C922	C3	R940	B1
C924	B4	R941	B4
C937	B3	R942	C3
C942	B1	R943	B4
C943	B1	R944	B4
C959	B1	R945	B4
C960	B4	R946	A4
C961	C1	R947	B4
C962	C1	R948	B3
D906	C3	R950	C3
D910	B2	R951	B3
D914	C3	R952	D2
D915	D2	R953	C3
D919	C4	R956	B3
D929	B4	R957	B2
IC902	C1	R958	C3
Q912	B3	R959	D3
Q913	B3	R960	D2
Q914	B3	R961	D2
Q915	B3	R962	C1
Q916	C1	R965	C4
R913	C1	R969	D3
R914	C4	R970	D3
R915	B3	R971	D3
R916	B3	R972	C1
R918	C1	R973	C2
R922	C3	R975	B3
R923	C3	R976	B3
R925	C3	R977	B4
R927	C2	R978	C4
R928	B3	R979	C3
R929	D2	R980	C1
R930	C3	R981	C1

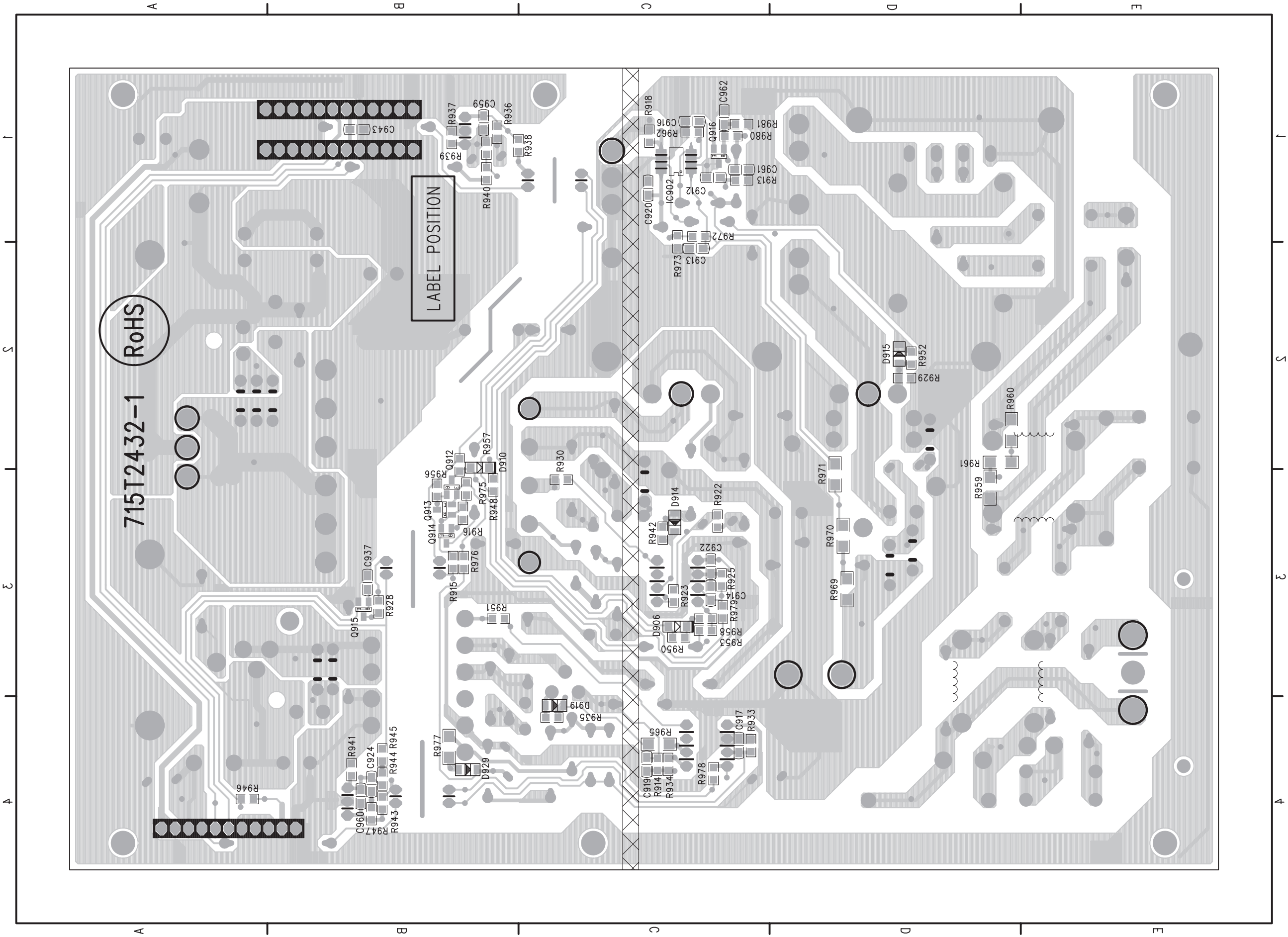
7. Circuit Diagrams and PWB Layouts

Power Board Layout(42")



BD901 D1
 C900 B2
 C901 E2
 C902 E2
 C907 D3
 C908 D4
 C909 E3
 C921 C3
 C926 D2
 C934 A4
 C935 D2
 C938 D2
 C939 A2
 C940 B4
 C944 C3
 C945 C4
 C946 B1
 C947 C3
 C948 D3
 C951 B2
 C952 B2
 C953 A2
 C954 A1
 C955 B4
 C956 B2
 C957 C4
 C958 B4
 CN902 A4
 CN903 A1
 CN904 E3
 CN905 A1
 CN906 E1
 D901 D3
 D907 C3
 D908 C4
 D911 C3
 D912 D2
 D918 C4
 D920 C1
 D922 A2
 D924 B4
 D925 C3
 D926 B2
 D927 A3
 F901 E4
 FB903 D3
 FB904 D3
 FB905 D3
 FB914 A2
 FB915 A2
 FB917 B2
 FB918 C3
 FB919 B3
 FB920 B3
 FB921 D2
 FB922 E2
 FB923 E1
 FB924 D3
 FB925 E3
 HBD901 D1
 HD901 D3
 HD922 A3
 HD927 A3
 HQ901 D2
 IC904 C3
 IC907 C4
 IC909 B3
 IC910 C1
 IC911 B4
 IC912 B1
 IC913 B4
 L910 A1
 L911 A4
 L912 E3
 L913 D3
 L914 C1
 L915 C3
 L916 C4
 Q901 C2
 Q902 D2
 Q908 C3
 R924 D2
 R926 D2
 R927 C3
 R932 C1
 R949 C2
 R963 C3
 R964 C1
 R974 C4
 RV902 D4
 T904 B3
 T905 B2
 TH902 E4
 ZD902 C2
 ZD904 C3
 ZD906 B4
 ZD908 C4

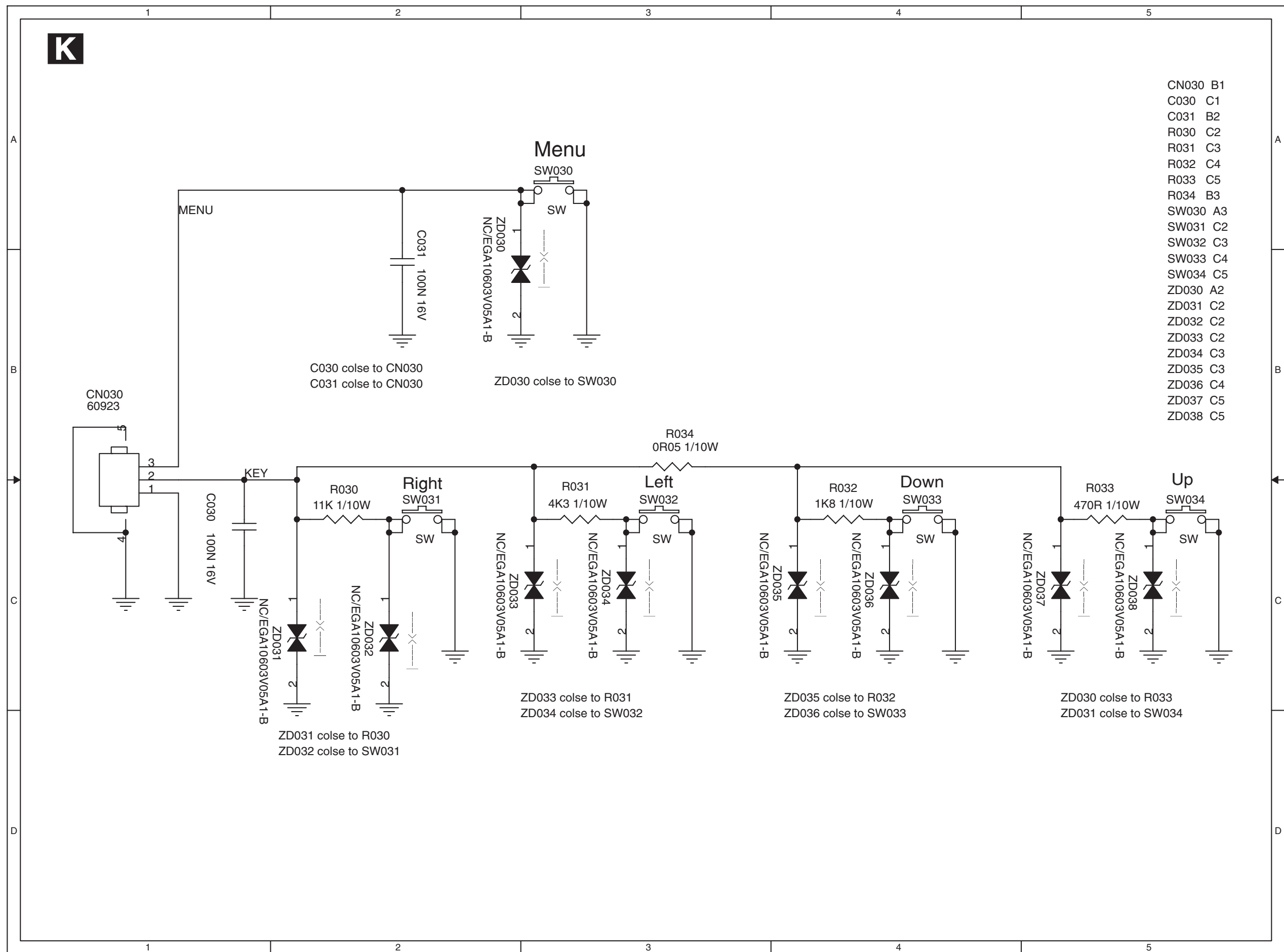
Power Board Layout(42")-1



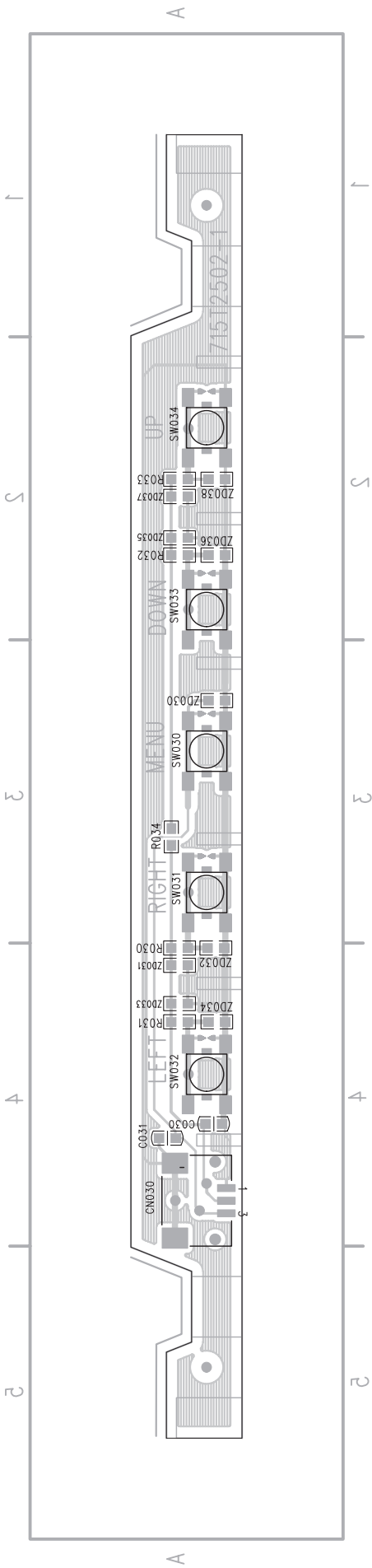
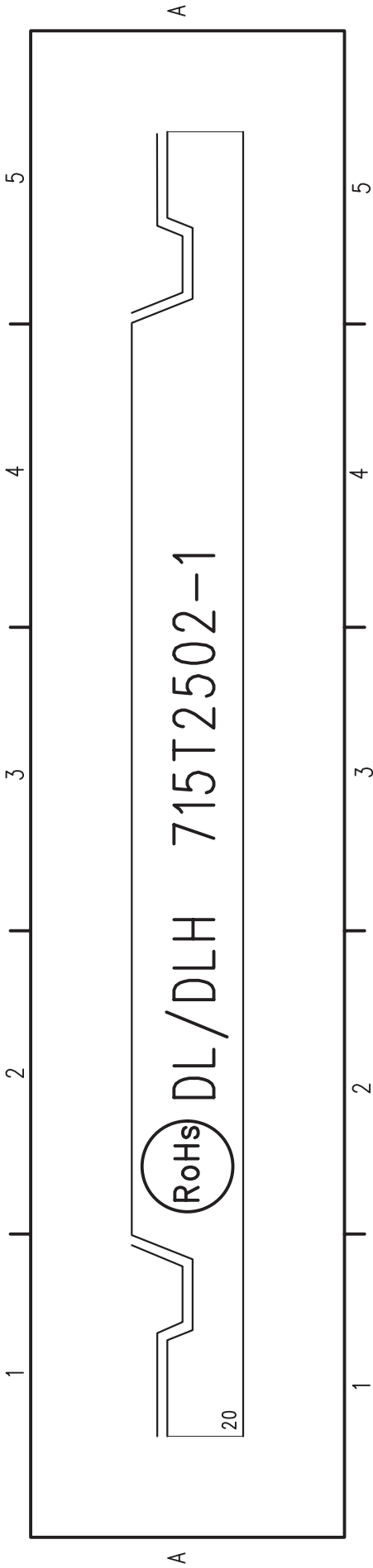
- C912 C1
- C913 C2
- C914 C3
- C916 C1
- C917 C4
- C919 C4
- C920 C1
- C922 C3
- C924 B4
- C937 B3
- C943 B1
- C959 B1
- C960 B4
- C961 C1
- C962 C1
- D906 C3
- D910 B2
- D914 C3
- D915 D2
- D919 C4
- D929 B4
- IC902 C1
- Q912 B3
- Q913 B3
- Q914 B3
- Q915 B3
- Q916 C1
- R913 C1
- R914 C4
- R915 B3
- R916 B3
- R918 C1
- R922 C3
- R923 C3
- R925 C3
- R928 B3
- R929 D2
- R930 C3
- R933 C4
- R934 C4
- R935 C4
- R936 B1
- R937 B1
- R938 B1
- R939 B1
- R940 B1
- R941 B4
- R942 C3
- R943 B4
- R944 B4
- R945 B4
- R946 A4
- R947 B4
- R948 B3
- R950 C3
- R951 B3
- R952 D2
- R953 C3
- R956 B3
- R957 B2
- R958 C3
- R959 D3
- R960 D2
- R961 D2
- R962 C1
- R965 C4
- R969 D3
- R970 D3
- R971 D3
- R972 C1
- R973 C2
- R975 B3
- R976 B3
- R977 B4
- R978 C4
- R979 C3
- R980 C1
- R981 C1

7. Circuit Diagrams and PWB Layouts

Key Board Schematic Diagram

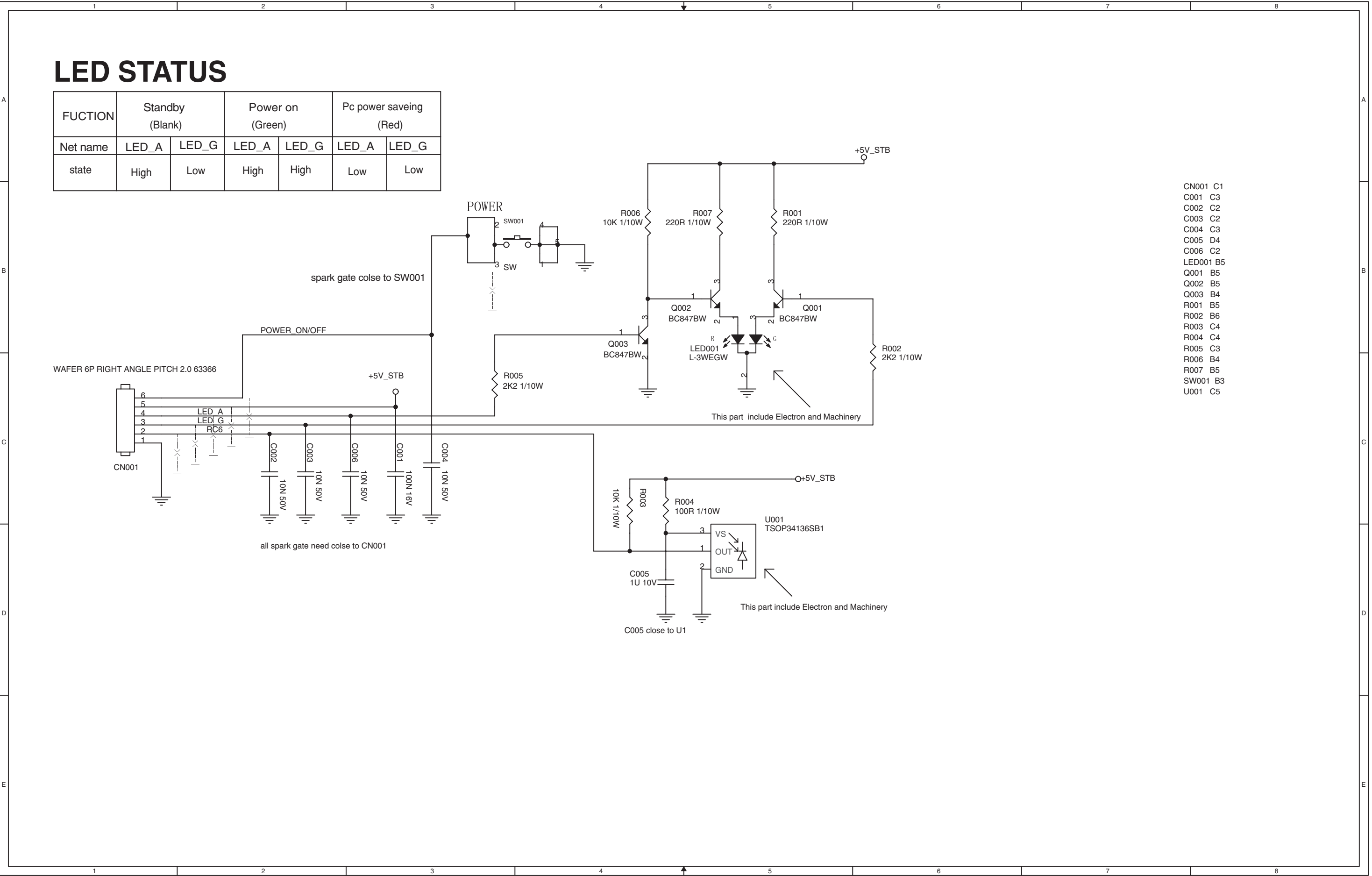


Key Board Layout



C030 A4 SW14 A3
C031 A4 SW15 A3
CN030 A4 SW16 A2
R030 A4 SW17 A2
R031 A4 ZD030 A3
R032 A2 ZD031 A4
R033 A2 ZD032 A4
R034 A3 ZD033 A4
SW030 A3 ZD034 A4
SW031 A3 ZD035 A2
SW032 A4 ZD036 A2
SW033 A2 ZD037 A2
SW034 A2 ZD038 A2
SW13 A4

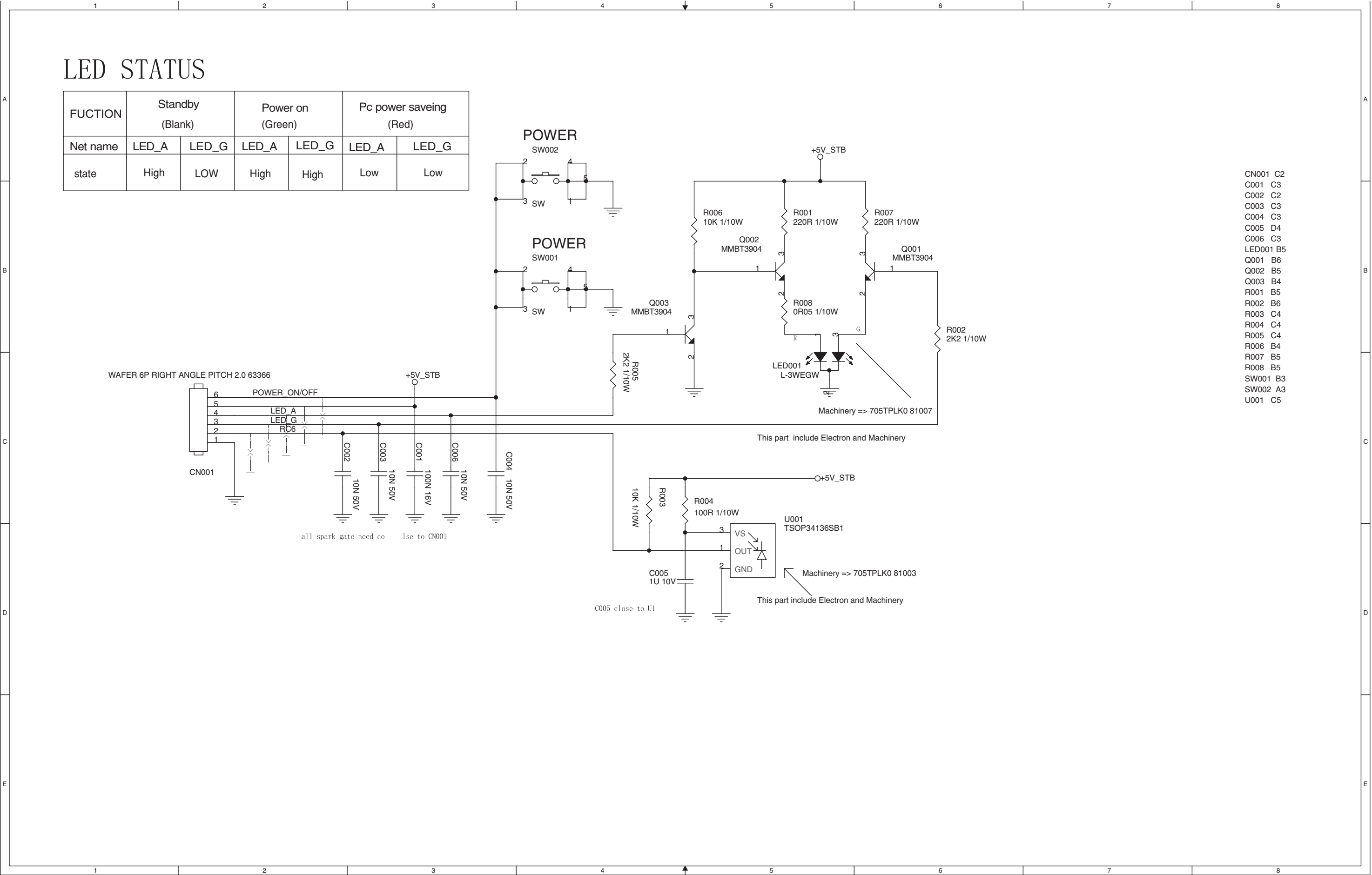
IR Board Schematic Diagram(26",32")



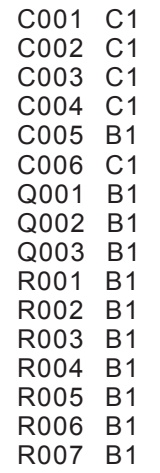
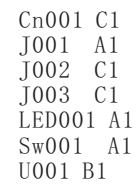
A
B
C
D
E

A
B
C
D
E

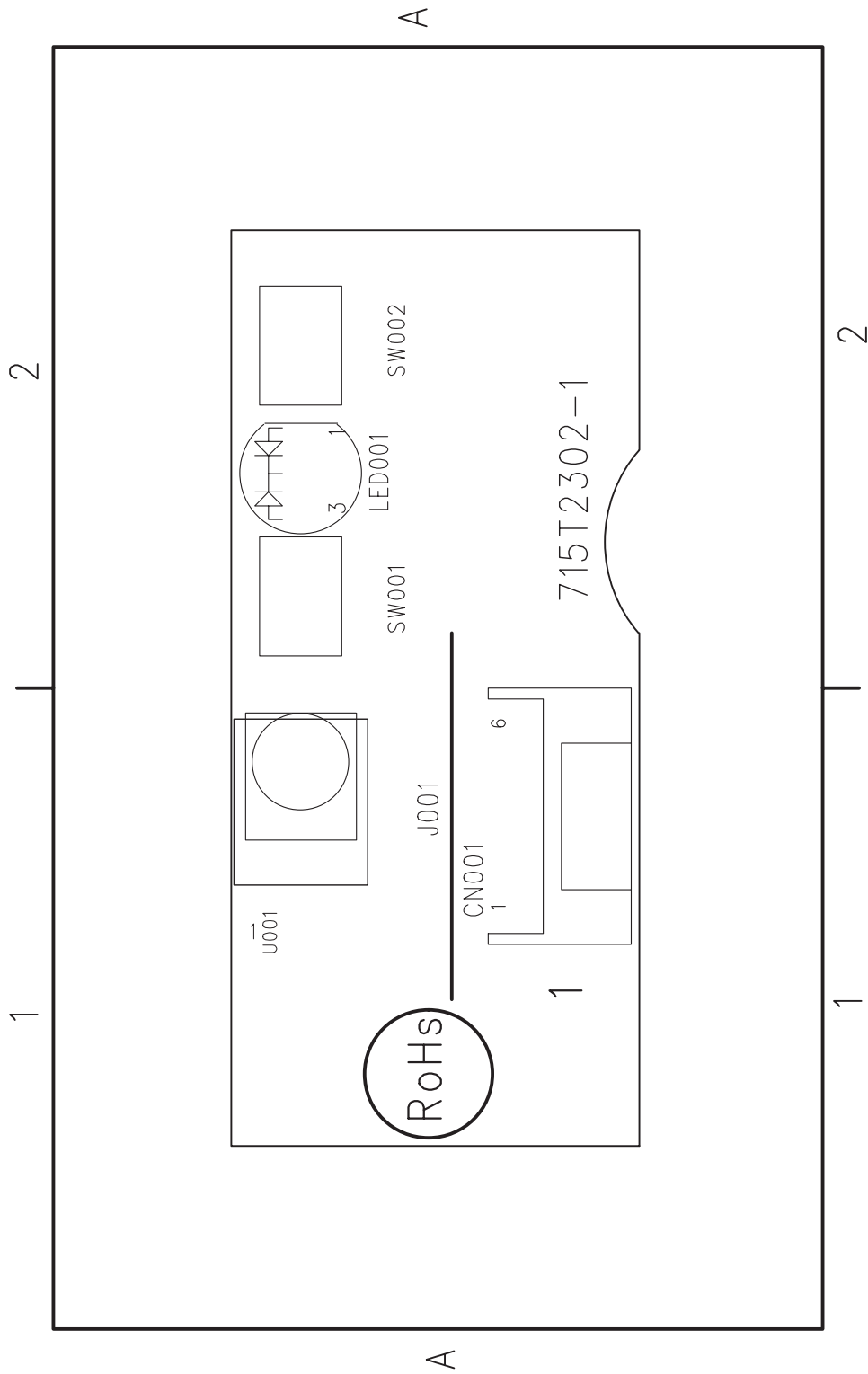
IR Board Schematic Diagram(37",42")



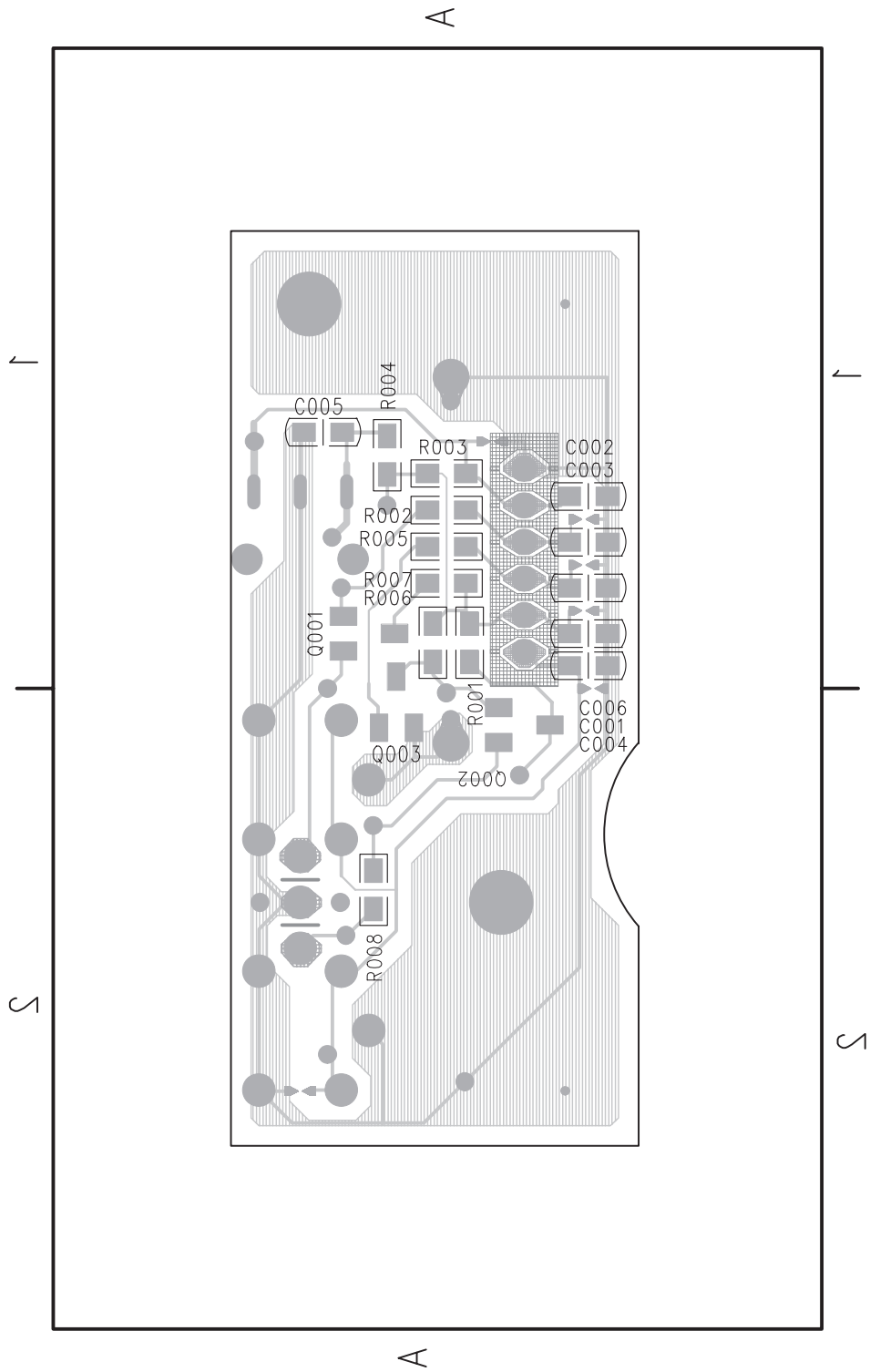
IR Board Layout(26"32")



IR Board Layout(37",42")



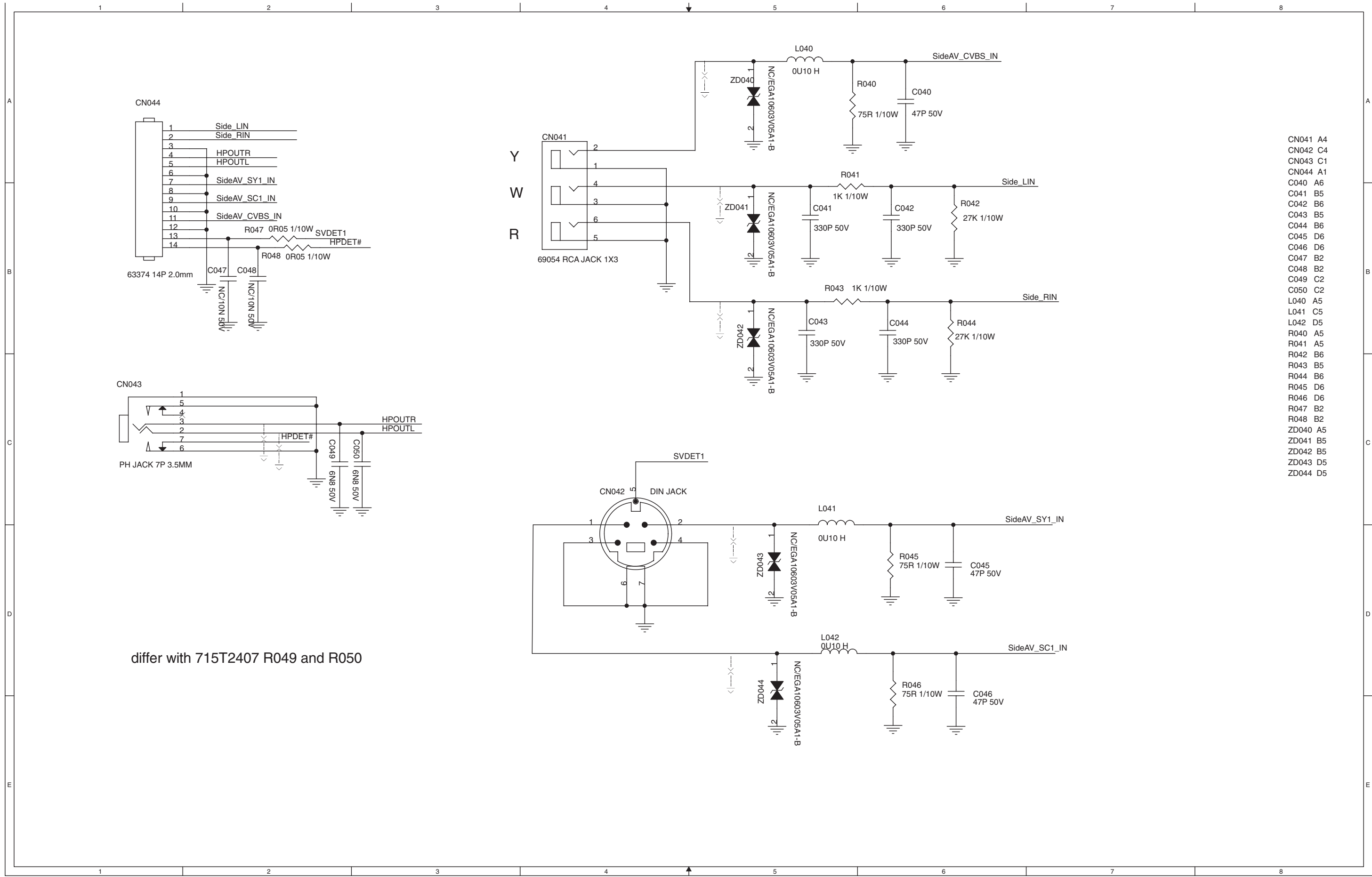
Cn001 A1
J001 A1
LED001 A2
Sw001 A2
Sw001 A2
U001 A1



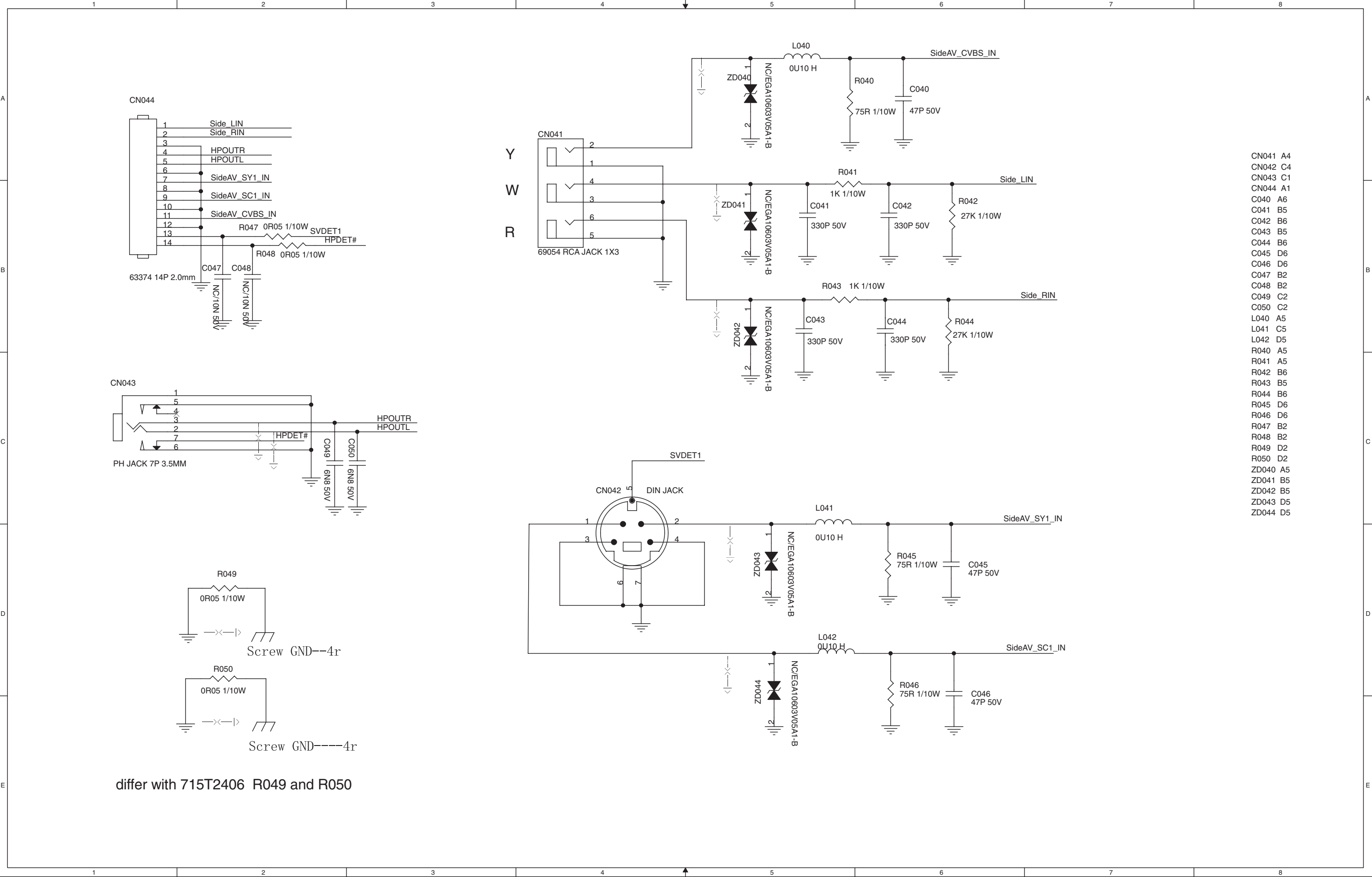
C001 A1
C002 A1
C003 A1
C004 A1
C005 A1
C006 A1
Q001 A1
Q002 A2
Q003 A2
R001 A1
R002 A1
R003 A1
R004 A1
R005 A1
R006 A1
R007 A1
R008 A2

7. Circuit Diagrams and PWB Layouts

Side AV Board Schematic Diagram(26",32",37")

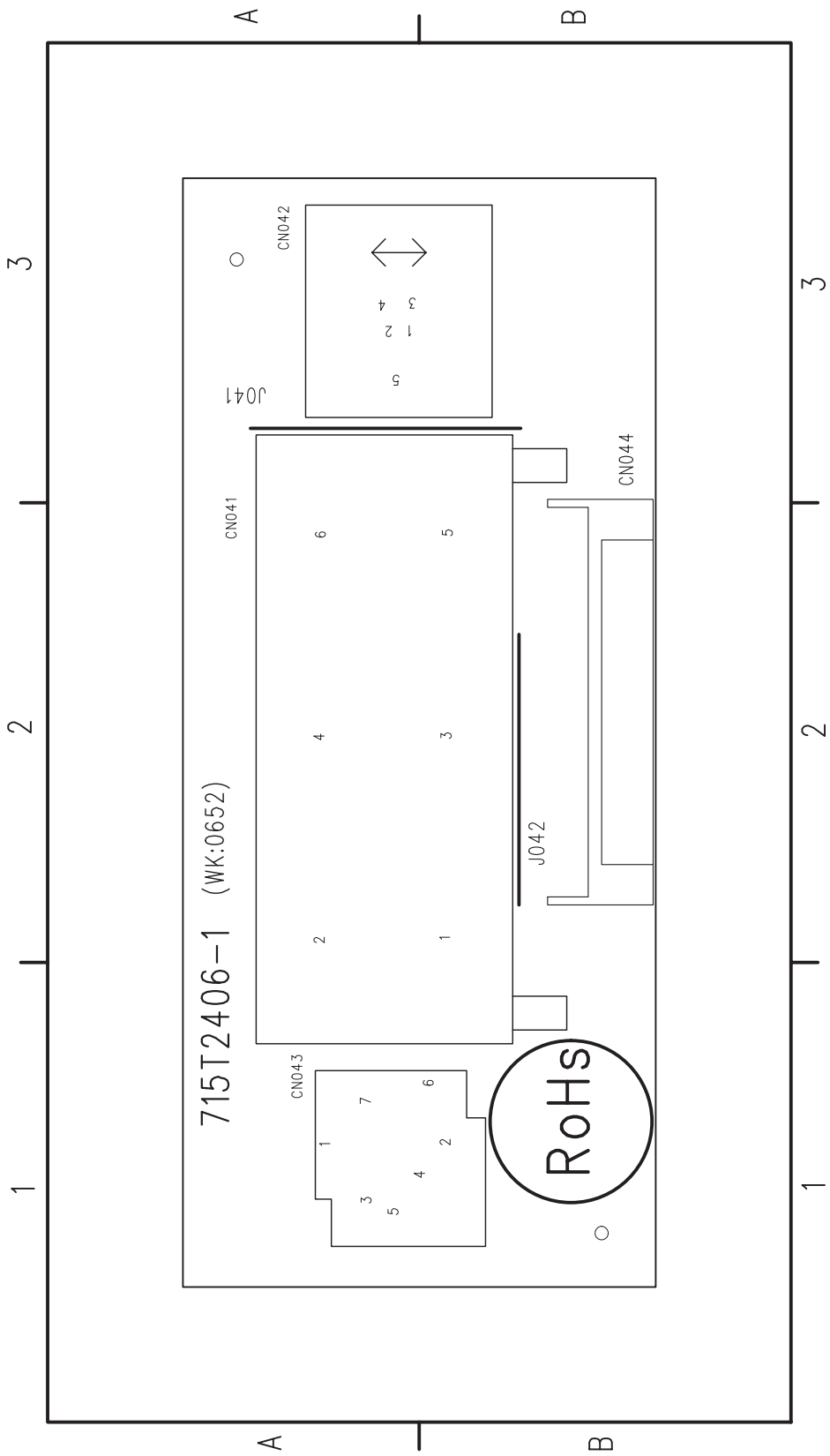


Side AV Board Schematic Diagram(42")



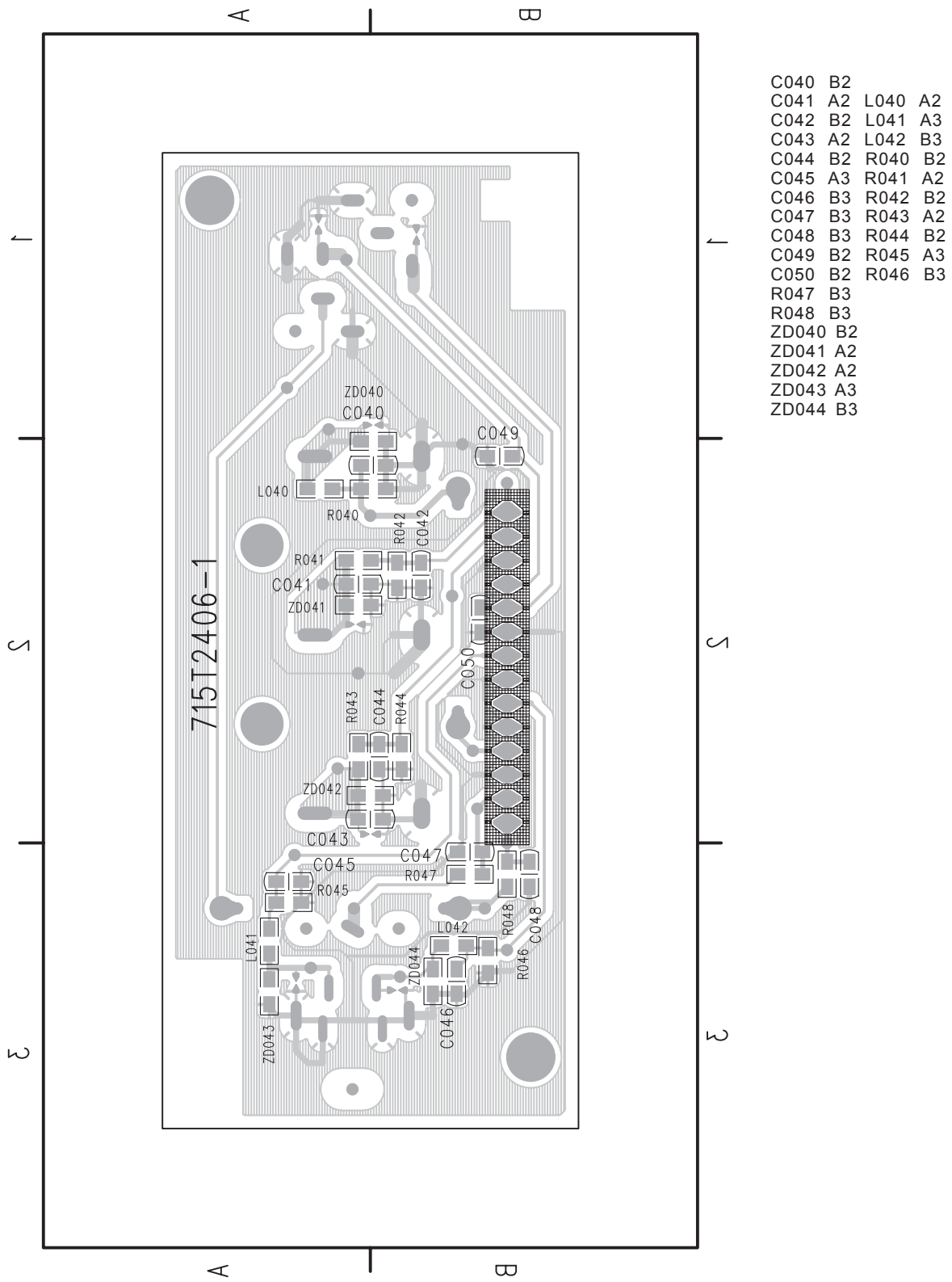
differ with 715T2406 R049 and R050

Side AV Board Layout(26",32",37")

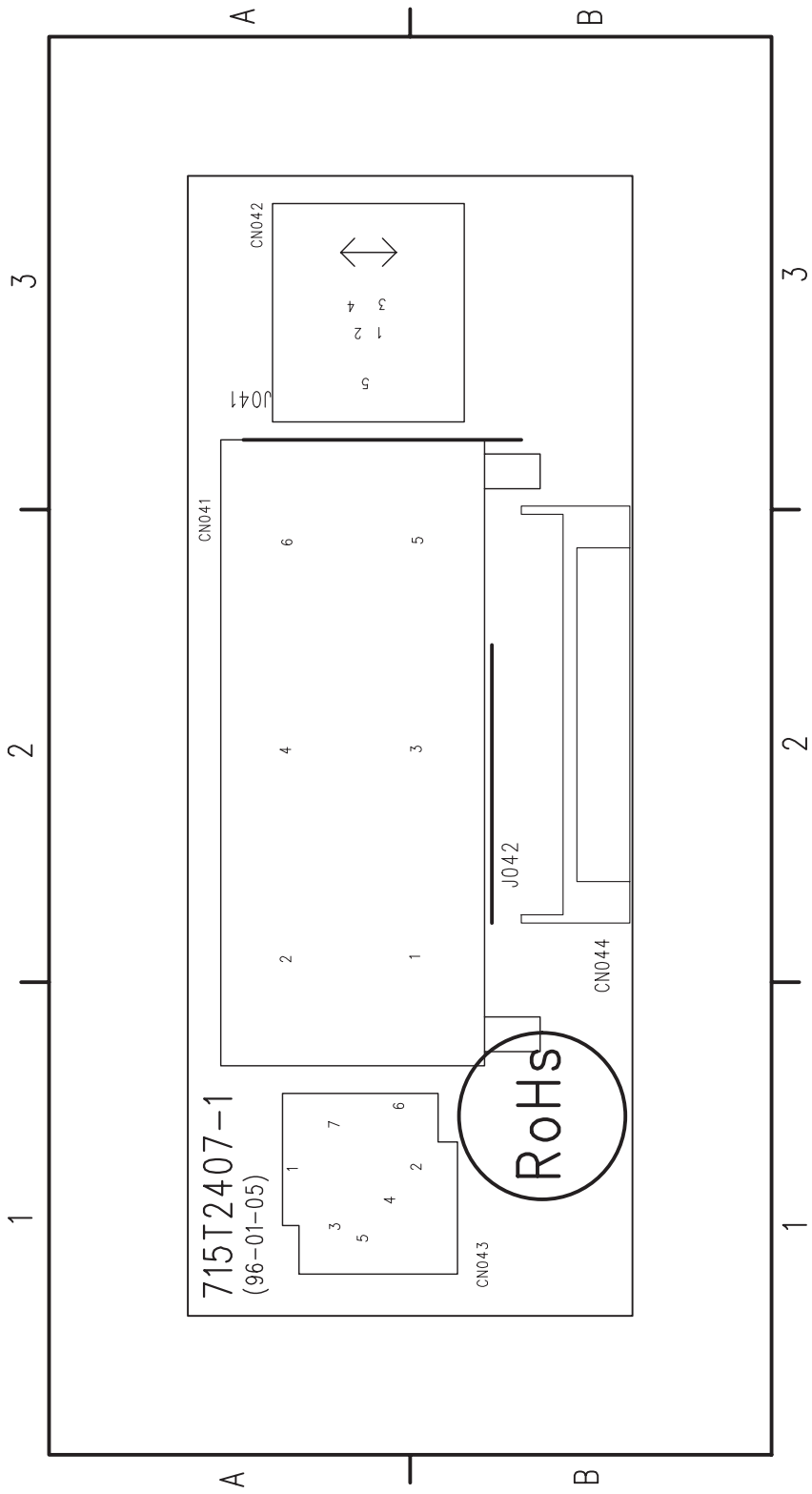


- Cn041 A2
- Cn042 A3
- Cn043 A1
- Cn044 B2
- J041 B3
- J042 B2

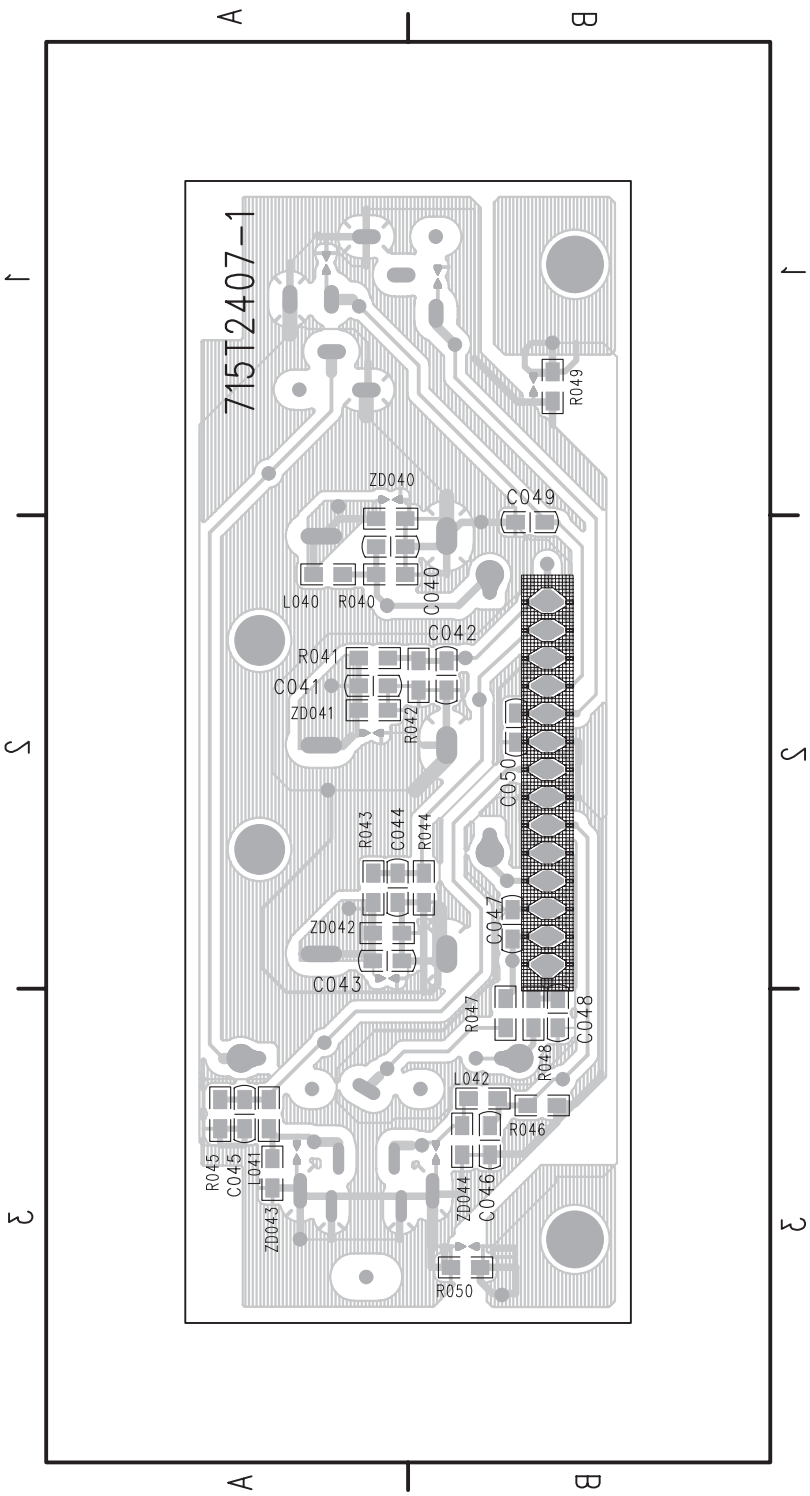
7. Circuit Diagrams and PWB Layouts



Side AV Board Layout(42")



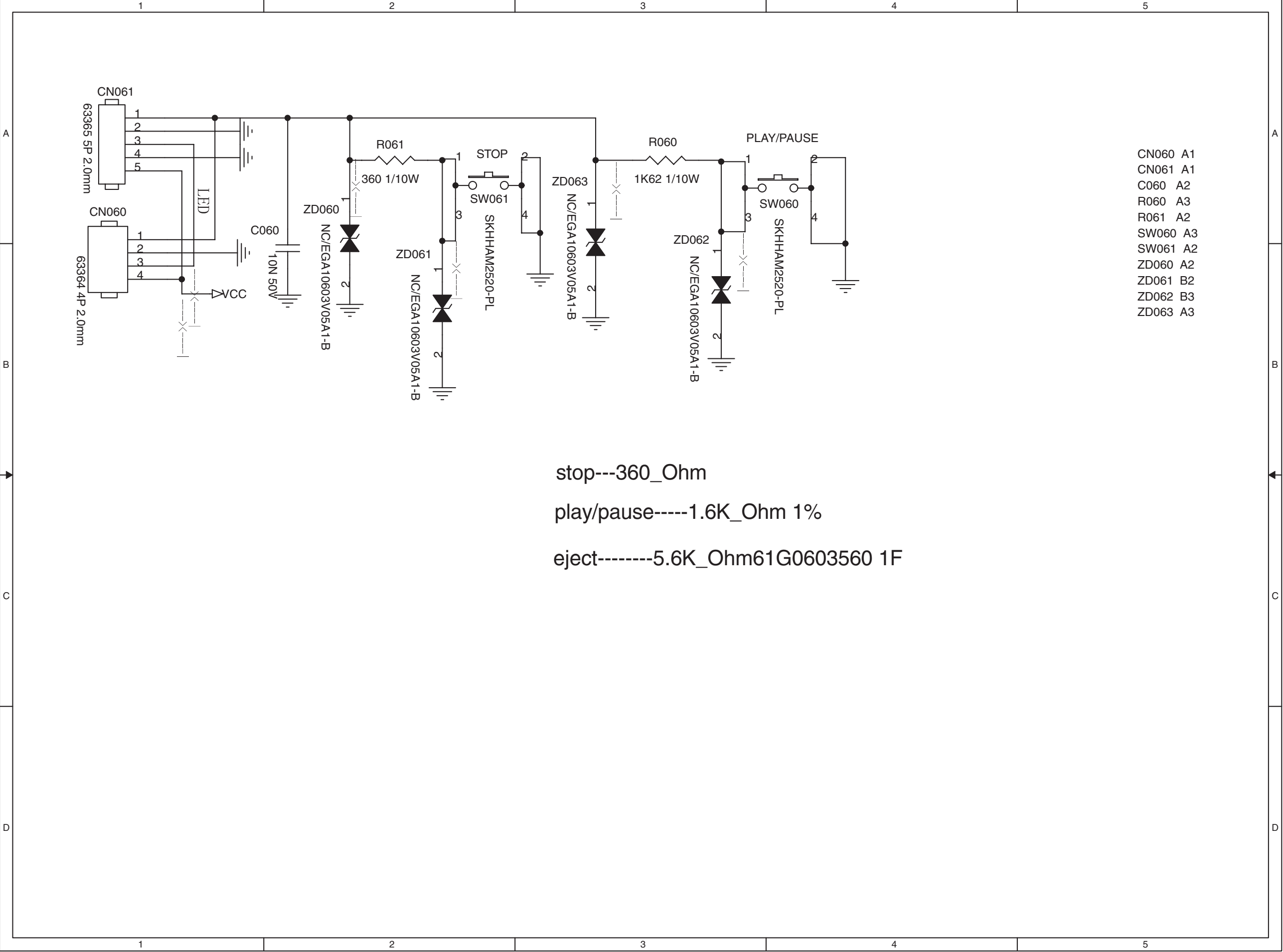
CN041 A2
CN042 A3
CN043 A1
CN044 B2
J041 B3
J042 B2



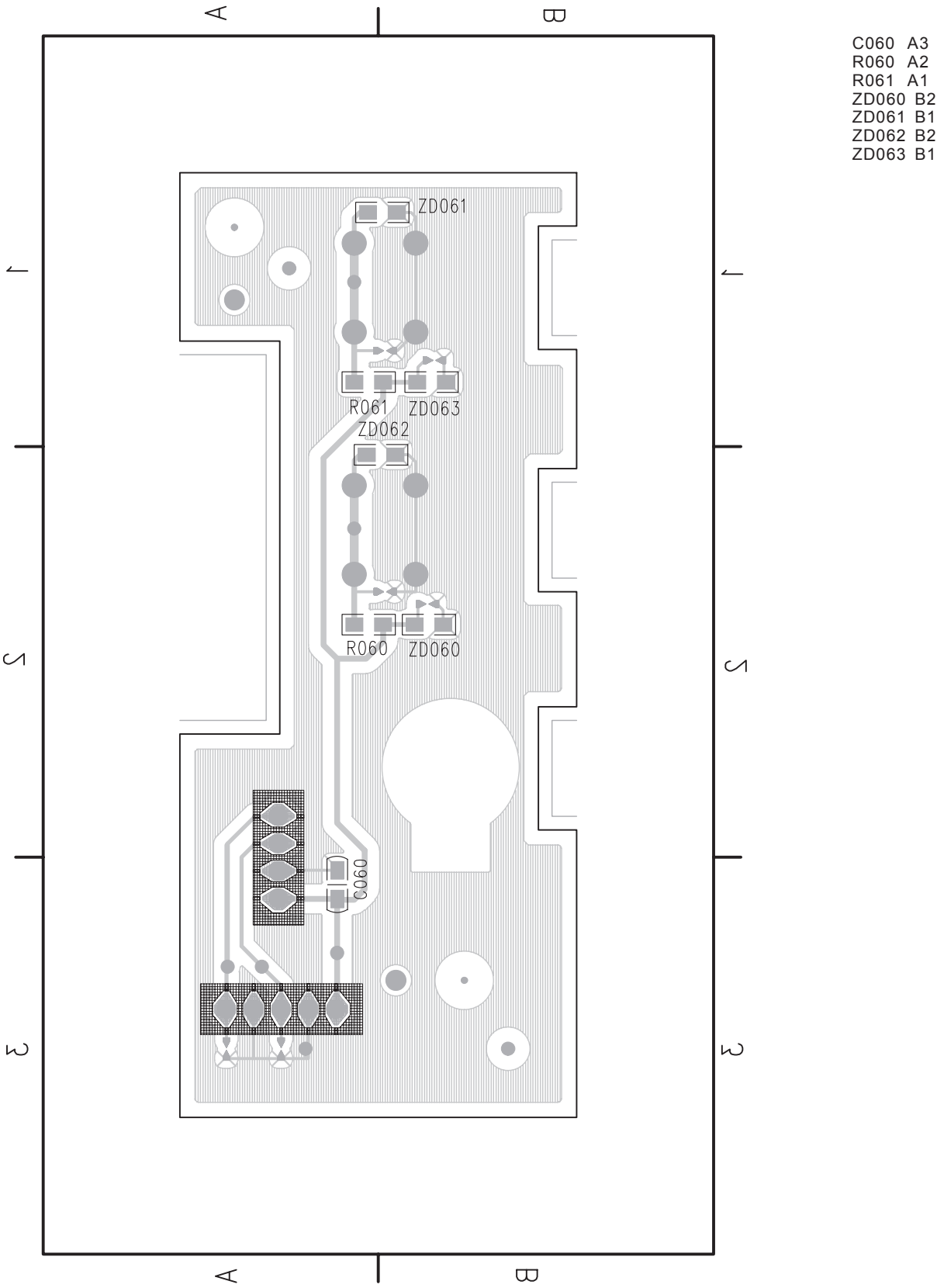
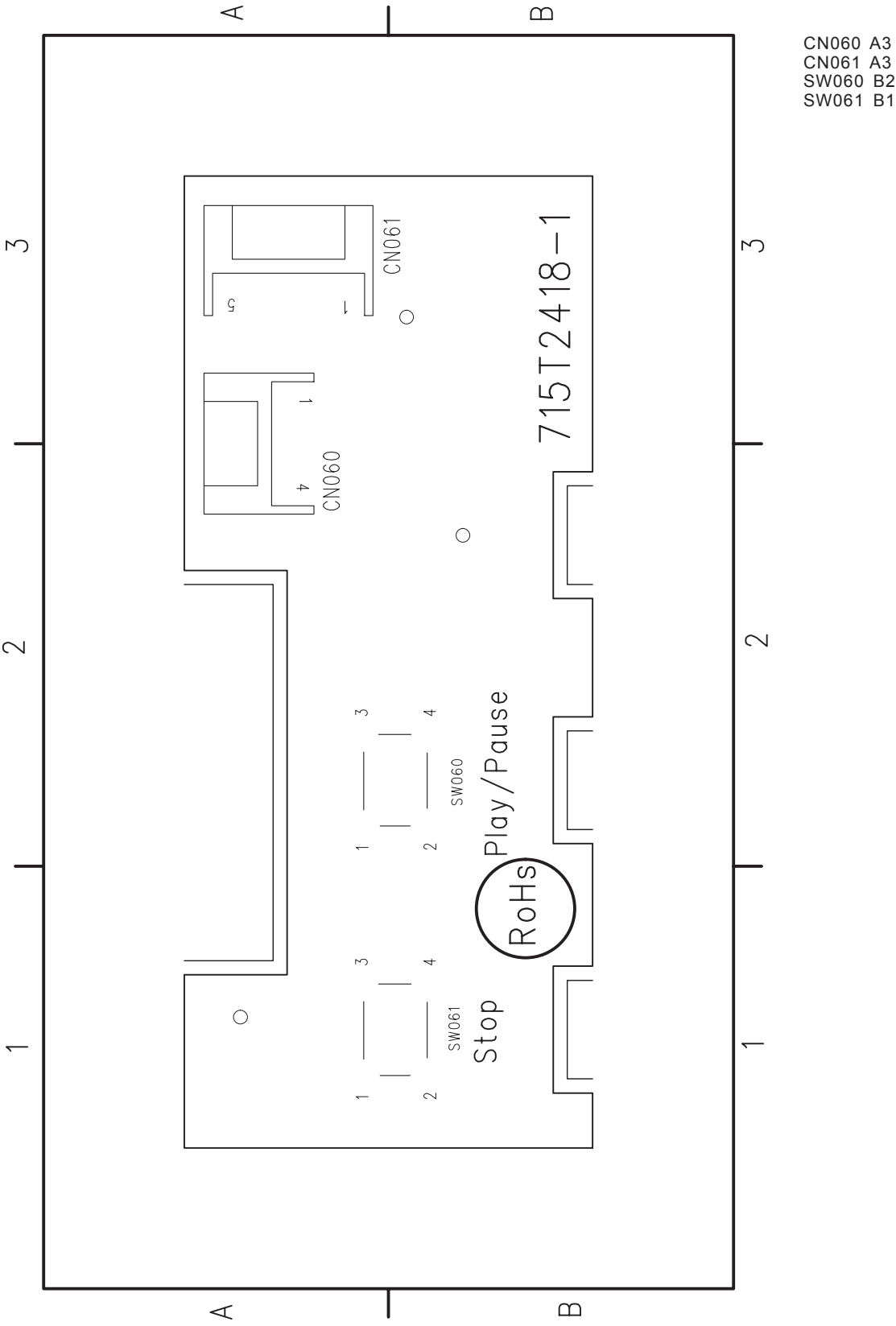
C040 A2 R041 A2
C041 A2 R042 B2
C042 B2 R043 A2
C043 A2 R044 B2
C044 A2 R045 A3
C045 A3 R046 B3
C046 B3 R047 B3
C047 B2 R048 B3
C048 B3 R049 B1
C049 B2 R050 B3
C050 B2 ZD040 A2
L040 A2 ZD041 A2
L041 A3 ZD042 A2
L042 B3 ZD043 A3
R040 A2 ZD044 B3

7. Circuit Diagrams and PWB Layouts

DVD Key Control Board Schematic Diagram(26MD357,32MD357)

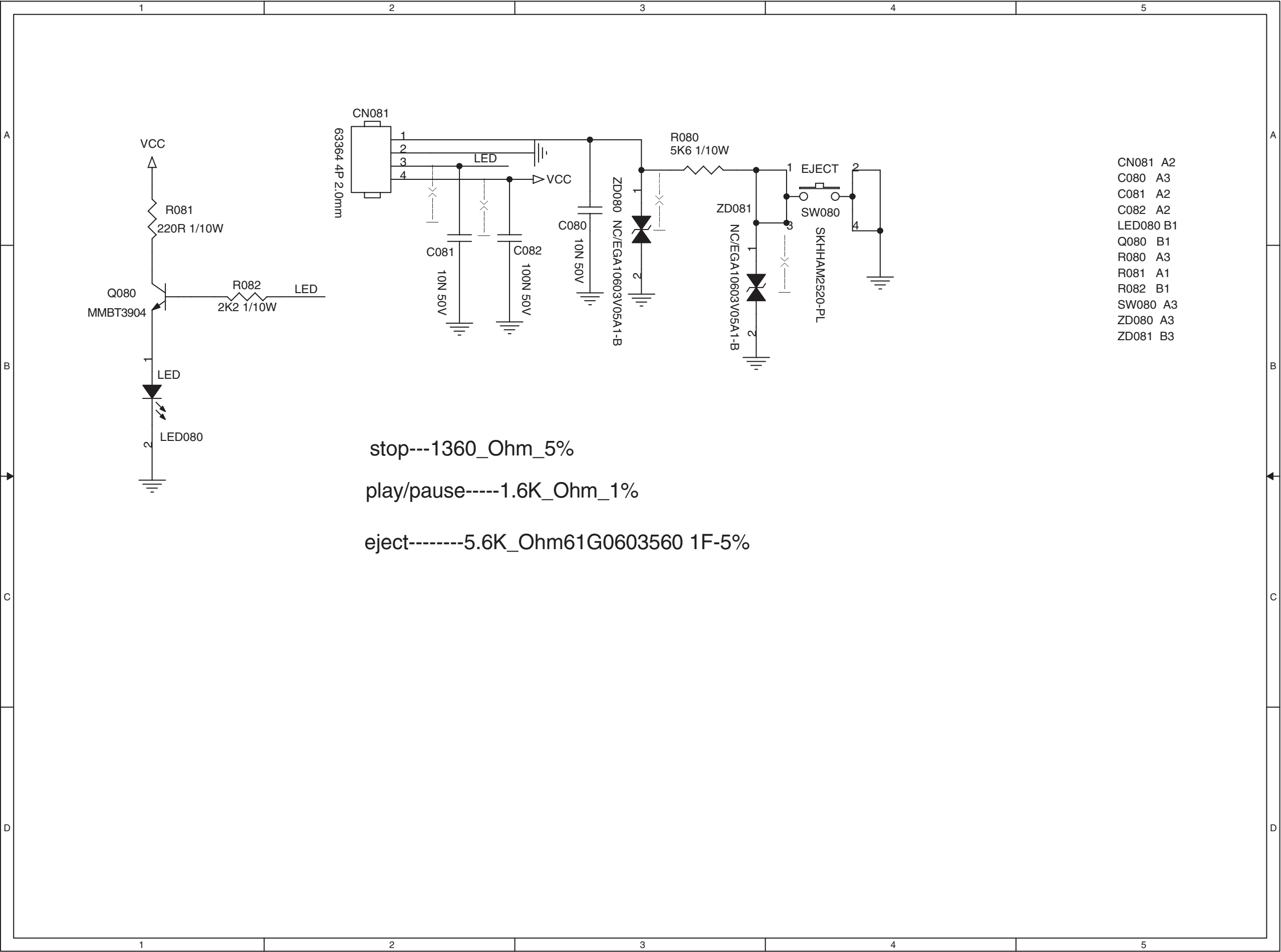


DVD Key Control Board Layout(26MD357, 32MD357)

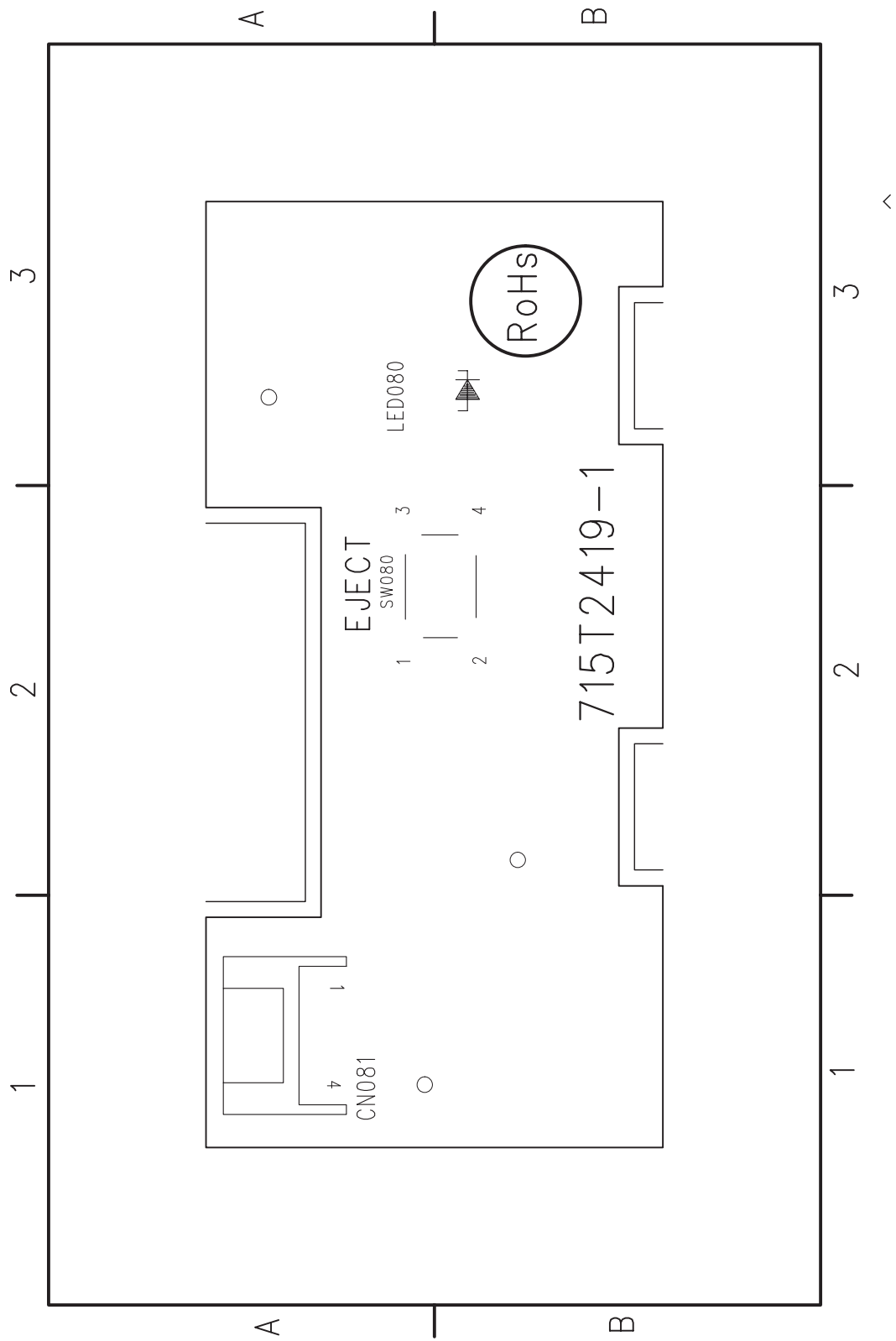


7. Circuit Diagrams and PWB Layouts

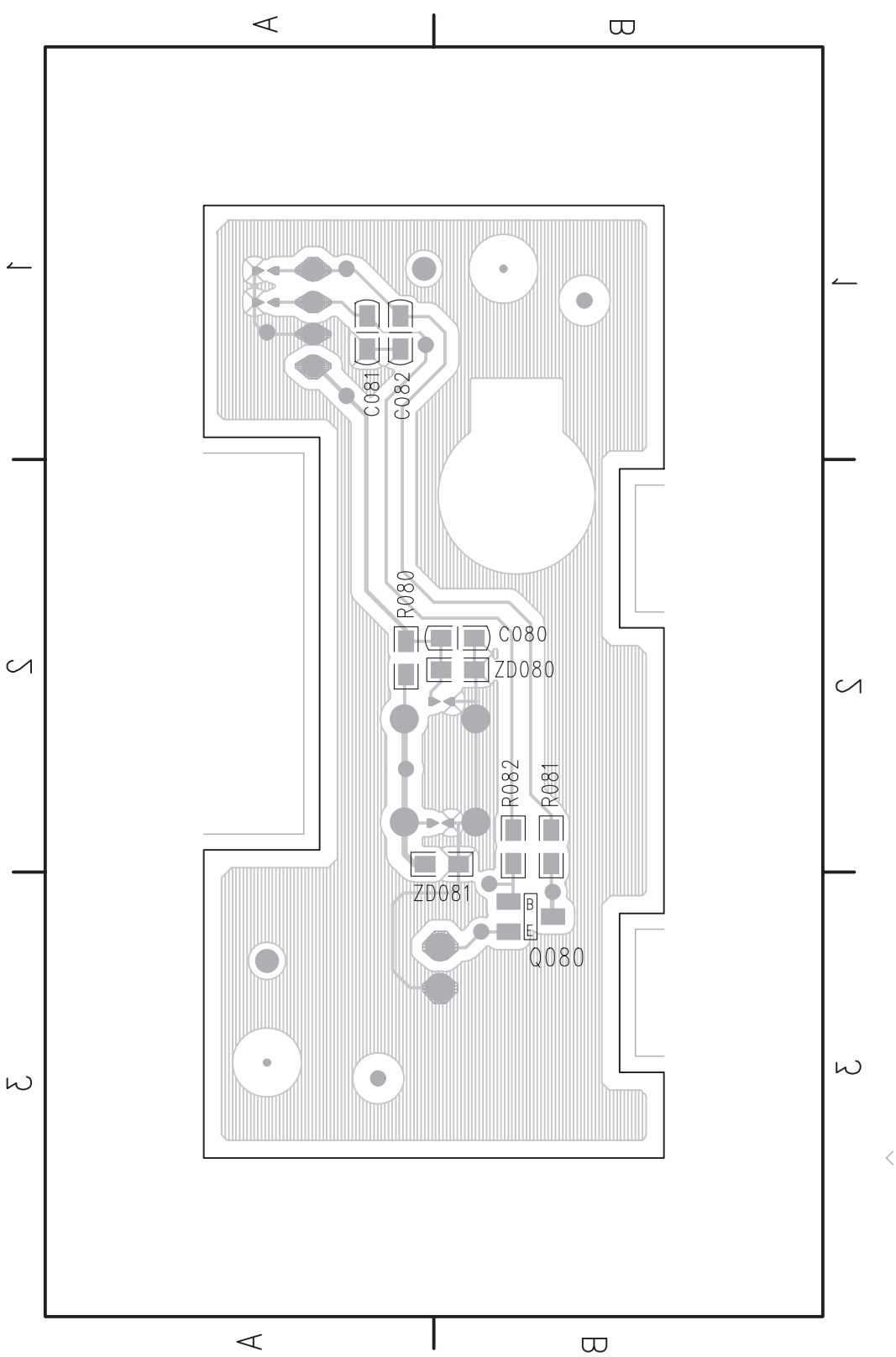
DVD LED Board Schematic Diagram(26MD357,32MD357)



DVD LED Board Layout(26MD357,32MD357)



CN081 A1
LED080 B3
SW080 B2



C080 B2
C081 A1
C082 A1
Q080 B3
R080 A2
R081 B2
R082 B2
ZD080 B2
ZD081 B2

8. Alignments

Index of this chapter:

8.1 Electrical Instructions

8.2 ISP Instructions

8.3 Serial Number Definition

8.4 WriteMTK_CSM_No_HDCP and WriteMTKHDCPKey Instructions

Notes: You could adjust the LCD/TV following this chapter when the LCD/TV has the below defect.

1. Change panel. 2. Change or repair main board. 3. LCD/TV color is not right. 4. The settings are disabled.

8.1 Electrical Instructions

8.1.1. Analog TV Mode display adjustment

8.1.1.1 White balance adjustment (B)

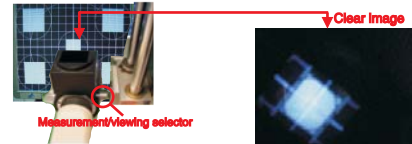
General set-up :

Equipment Requirements: Minolta CA-110 or Equivalent Color analyzer
Fluke 54200 or equivalent TV RF signal generator

Input requirements:

Input Signal Type : RF signal

1. Set to NTSC system, frequency=187.25MHZ(for NAFTA model), with White pattern of 100%
2. Select Smart picture to **Personal** mode and check the x, y data.



Input Signal Strength : 10mV (80 dBuV) terminal voltage.

Input Injection Point : TV Tuner input

Alignment method:

Initial Set-up:

1. Select source as "TV".
2. Set Smart picture as "**Personal**" and to be Contrast =**50 (LPL)**, Brightness=**50 (LPL)**, at normal menu mode.
3. Apply "100% Full White" pattern by TV pattern generator.
4. Enter factory mode menu: press MENU + Numeric keys "062596" + MENU key (**FAC mode menu**). Then select "Factory" item.

Alignment:

1. Set color temperature to "NORMAL".
2. At **FAC mode menu**, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "NORMAL" color coordinates specification below. Then store those values to NVM.
3. Set color temperature to "WARM".
4. At **FAC mode menu**, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "WARM" color coordinates specification below. Then store those values to NVM.
5. Set color temperature to "COOL".
6. At **FAC mode menu**, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "COOL" color coordinates specification below. Then store those values to NVM

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

Picture Mode	x	y
Normal (8500°K)	0.291±0.005	0.302±0.005
WARM (6500°K)	0.314±0.005	0.324±0.005
COOL (11500°K)	0.273±0.005	0.280±0.005

Table 5: Reading with Minolta CA-110.

If you have not CA-110, the following R, G and B values are for your reference.

	Normal/(8500°K)	Cool/(11500°K)	Warm/(6500°K)
R	117	144	118
G	112	130	116
B	108	123	144

7. Check the gray pattern should be distinguished and color bar is correct

Note:

1. Use Minolta CA-110 for color coordinates and luminance check.
2. Luminance > **400 cd/m²** in the center of the screen when CLR TEMP R, CLR TEMP G, CLR TEMP B set to **128** and Brightness control at **100**; Contrast control at **100**
3. Reset AV setting, smart picture shall be recalled to be "**Rich**" and Contrast=**60 (LPL)**, Brightness=**55 (LPL)**.

8.1.2. PC mode display adjustment

8.1.2.1 Display quality adjustment

Use timing mode as describe in 2.2, and use the POPO (pixel on pixel off) pattern

to adjust the clock until no stripe and adjust the phase until clear picture.

("Auto" will be done every time switching to PC mode and mode change)

Check all preset 6 modes.

8.1.2.2 WHITE-D adjustment (B)

General set-up :

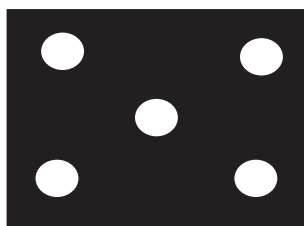
Equipment Requirements: Minolta CA-110 or Equivalent Color analyzer
Chroma 2250 or equivalent PC signal generator

Input requirements:

Input Signal Type : PC VGA signal
1. 1024X768/60Hz PC mode with 5 white block pattern. (see pattern-1)
2. Select Smart picture to **Normal** mode and check the x, y data.

Input Signal Strength : 0.7 Vp-p linear voltage.

Input Injection Point : PC D-SUB input



OR



Pattern-1

Alignment method:

Initial Set-up:

1. Select source as "PC".
2. Set Contrast = **50 (LPL)** and Brightness=**50 (LPL)** , at normal menu mode.
3. Apply "5 white block" pattern by VGA pattern generator.
4. Enter factory mode menu: press MENU + Numeric keys "062596" + MENU key (**FAC mode menu**). Then select "Factory" item.

Alignment:

1. At **FAC mode menu**, select AUTO_COLOR item. Then press "OK" key to adjust ADC_GAIN_R, ADC_GAIN_G, ADC_GAIN_B and ADC_OFFSET_R, ADC_OFFSET_G, ADC_OFFSET_B. Then store those values to NVM.
2. Set color temperature to "NORMAL".
3. At **FAC mode menu**, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "NORMAL" color coordinates specification below. Then store those values to NVM.
4. Set color temperature to "WARM".
5. At **FAC mode menu**, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "WARM" color coordinates specification below. Then store those values to NVM.
6. Set color temperature to "COOL".
7. At **FAC mode menu**, adjust the CLR TEMP R, CLR TEMP G, CLR TEMP B values to meet "COOL" color coordinates specification below. Then store those values to NVM.

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

	X	Picture Mode	y
Normal (8500°K)	0.291±0.005		0.302±0.005
WARM (6500°K)	0.314±0.005		0.324±0.005
COOL(11500°K)	0.273±0.005		0.280±0.005

Readings with Minolta CA-110.

8.1.2.3

Check grayscale

Apply 32 gray pattern.

Check the color poor & noise condition of 32 gray pattern.

8. Alignments

8.1.3. YPbPr mode display adjustment

8.1.3.1 White Balance adjustment (B)

General set-up :

Equipment Requirement: Minolta CA-110 or Equivalent Color analyzer
Quantum Data Pattern Generator 801GD or 802G or Fluke 54200

Input requirements:

- Input Signal Type : YPbPr signal
1. 1080i mode, SMPTE color pattern by 801GD or 802G.or 576i (PAL system), color bar with black/white pattern by Fluke 54200.
 2. Select Smart picture to **Personal** mode and check the x, y data.

Input Signal Strength : 1 Vpp for Y signal ; 350 mVpp for Pb & Pr signal

Input Injection Point : AV1 YPbPr (RAC jack)

1080i, SMPTE color pattern.



576i (PAL system), color bar with black and white pattern



Alignment method:

Initial Set-up:

1. Select source as "AV1".
2. Set Smart picture as "**Personal**" and to be Contrast =50 (LPL), Brightness=50 (LPL) , at normal menu mode.
3. Apply "SMPTE color" pattern or "color bar with black & white" pattern by signal generator.
4. Enter factory mode menu: press MENU + Numeric keys "062596" + MENU key (**FAC mode menu**). Then select "Factory" item.

Alignment:

1. At **FAC mode menu**, select AUTO_COLOR item. Then press "OK" key to adjust ADC_GAIN_R, ADC_GAIN_G, ADC_GAIN_B and ADC_OFFSET_R, ADC_OFFSET_G, ADC_OFFSET_B. Then store those values to NVM.
2. Apply full white pattern.
3. Set color temperature to "NORMAL".
4. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "NORMAL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "NORMAL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.
5. Set color temperature to "WARM".
6. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "WARM" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "WARM" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.
7. Set color temperature to "COOL".
8. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "COOL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "COOL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

Picture Mode	x	y
Normal (8500°K)	0.291±0.010	0.302±0.010
WARM (6500°K)	0.314±0.010	0.324±0.010
COOL(11500°K)	0.273±0.010	0.280±0.010

8.1.3.2 Check grayscale

Apply 32 gray pattern.

Check the color poor & noise condition of 32 gray pattern

8.1.4. HDMI mode display adjustment

8.1.4.1 White Balance adjustment (B)

General set-up :

Equipment Requirement: Minolta CA-110 or Equivalent Color analyzer
Quantum Data Pattern Generator 802BT or 881

Input requirements:

Input Signal Type : HDMI signal

1. 1080i mode, full white pattern.
2. Select Smart picture to **Personal** mode and check the x, y data.

Input Signal Strength : 4 channels TMDS signal

Input Injection Point : HDMI1 input.

Alignment method:

Initial Set-up:

1. Select source as "HDMI1".
2. Set Smart picture as "**Personal**" and to be Contrast =50 (LPL), Brightness=50 (LPL) , at normal menu mode.
3. Apply full white pattern by Quantum Data signal generator.
4. Enter factory mode menu: press MENU + Numeric keys "062596" + MENU key (FAC mode menu). Then select "Factory" item.

Alignment:

1. Set color temperature to "NORMAL".
2. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "NORMAL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "NORMAL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.
3. Set color temperature to "WARM".
4. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "WARM" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "WARM" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.
5. Set color temperature to "COOL".
6. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "COOL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "COOL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

Picture Mode	x	y
Normal (8500°K)	0.291± 0.010	0.302± 0.010
WARM (6500°K)	0.314± 0.010	0.324± 0.010
COOL(11500°K)	0.273± 0.010	0.280± 0.010

8.1.5. DTV (ATSC) mode display adjustment

8.1.5.1 White Balance adjustment (B)

General set-up :

Equipment Requirement: Minolta CA-110 or Equivalent Color analyzer.
ATSC signal generator - Sencore ATSC997 or equivalent generator

Input requirements:

Input Signal Type : RF signal

1. Set center frequency=69MHz, playing transport stream with white pattern.
2. Select Smart picture to **Personal** mode and check the x, y data.

Input Signal Strength : 60 dBuV

Input Injection Point : RF input

Alignment method:

Initial Set-up:

1. Select source as "TV".
2. Set Smart picture as "**Personal**" and to be Contrast =50 (LPL), Brightness=50 (LPL) , at normal menu mode.
3. Apply white pattern by ATSC997 signal generator.
4. Enter factory mode menu: press MENU + Numeric keys "062596" + MENU key (FAC mode menu). Then select "Factory" item.

8. Alignments

Alignment:

1. Set color temperature to "NORMAL".
2. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "NORMAL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "NORMAL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.
3. Set color temperature to "WARM".
4. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "WARM" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "WARM" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.
5. Set color temperature to "COOL".
6. Copy CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values from "COOL" color temperature in Analog TV mode. Check whether (x,y) color coordinates meet "COOL" color specification below. If color coordinates are out of specification, fine-tune CLR_TEMP_R, CLR_TEMP_G and CLR_TEMP_B values. Then store those values to NVM.

Color temperature Normal/Warm/Cool (x, y) co-ordinates specification:

Picture Mode	x	y
Normal (8500°K)	0.291±0.010	0.302±0.010
WARM (6500°K)	0.314±0.010	0.324±0.010
COOL(11500°K)	0.273±0.010	0.280±0.010

8.1.6. HDMI HDCP Key Download

8.1.6.1 HDCP Key Encryption

The handling of HDCP keys must be done in the most secure way.

The HDCP keys purchased / delivered from Digital Content Protection, LLC are first encrypted by MTK encryption software. Then the encrypted keys are stored in secure room or secure PC in production line.

8.1.6.2 HDCP Key Downloading to Set

In production line PC, execute HDCP key programming software to load encrypted key data from secureroom or secure PC to specific positions of set's NVM via UART interface of MT537x chip.

8.1.6.3 Test HDCP Key

- 8.1.6.3.1. Use QuantumData 802BT or equivalent instrument with HDCP test pattern to verify HDCP key loaded in the set. The "PASS" information will be shown in the lower center block of the screen when HDCP key is correctly loaded.
- 8.1.6.3.2 Use DVD player Pioneer DVD player xxx or equivalent DVD player with HDMI output to verify HDCP key loaded in the set. The video should be smoothly displayed when HDCP key is correctly loaded

8.2 Service Tools

8.2.1 ComPair

Introduction

ComPair (Computer Aided Repair) is a Service tool for Philips Consumer Electronics products. and offers the following:

1. ComPair helps you to quickly get an understanding on how to repair the chassis in a short and effective way.
2. ComPair allows very detailed diagnostics and is therefore capable of accurately indicating problem areas. You do not have to know anything about I²C or UART commands yourself, because ComPair takes care of this.
3. ComPair speeds up the repair time since it can automatically communicate with the chassis (when the uP is working) and all repair information is directly available.
4. ComPair features TV software upgrade possibilities.

Specifications

ComPair consists of a Windows based fault finding program and an interface box between PC and the (defective) product. The (new) ComPair II interface box is connected **to the PC** via an USB cable. For the TV chassis, the ComPair interface box and the TV communicate via a bi-directional cable via the service connector(s).

How to Connect

This is described in the ComPair chassis fault finding database.

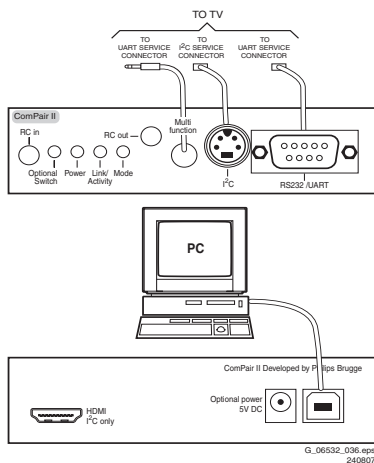


Figure 8-1 ComPair II interface connection

Caution: It is compulsory to connect the TV to the PC as shown in the picture above (with the ComPair interface in between), as the ComPair interface acts as a level shifter. If one connects the TV directly to the PC (via UART), ICs will be blown!

How to Order

ComPair II order codes:

- ComPair II interface: 3122 785 91020.
 - ComPair32 CD (update): 3122 785 60160.
 - ComPair I²C interface cable: 3122 785 90004 (to be used with chassis L01, A02, A10, EMx, TPM1.xA, etc ...).
 - ComPair I²C interface extension cable: 3139 131 03791 (to be used with chassis L01, A02, A10, L04, LC4, LC7.1, LC7.2).
 - ComPair UART interface cable: 3122 785 90630 (to be used with chassis LC4, EJ3, BJ2, BL2, BP2, ...).
 - ComPair RS232 cable: 3104 311 12742 (to be used with chassis Q52x).
 - ComPair I²C interface cable (3.5 mm Jack-to-SVHS plug): 9965 100 07325 (to be used with chassis LC7.5).
- Note:** For I²C it is **compulsory** to use this particular cable.
- ComPair UART interface cable (3.5 mm Jack-to-Jack): 3138 188 75051 (to be used with chassis LC7.5).

Note: For UART it is also allowed to use a standard “Jack-to-Jack” cable.

Note: If you encounter any problems, contact your local support desk.

8.2.2 LVDS Tool

Support of the LVDS Tool has been discontinued.

9. Circuit Descriptions, Abbreviations List and IC Data Sheets

Index of this chapter

9.1 Circuit Descriptions

9.2 Abbreviations List

9.3 IC Data Sheets

9.1 Circuit Descriptions

This is a new TV chasis, specifically developed for NTSC/ATSC/QAM reception. The key components are :

MT537x: DTV backend decoder and TV controller (MT5371 for WXGA & MT5373 for full HD).

MT5112BD: Channel Decoder

WM8776S: Stereo Audio Codec

Chassis Function Description

Terrestrial Reception

The TV receives multimedia information by tuning to one of many 6 MHz input channels available via a terrestrial connection (including NTSC & ATSC).

When the input channel is an analog channel, the signal is processed via the NTSC decoder and the VBI data decoder. If the input channel is a digital channel, the signal is processed via the channel decoder and DTV backend decoder.

Cable Reception

The TV receives multimedia information by tuning to one of many 6 MHz input channels available via a cable connection (NTSC & Free QAM). When the input channel is a digital channel, it is processed via the QAM demodulator.

Signal Processing

The key part in the system, the MT537x, performs almost all key features, like video quality enhancement, smooth picture quality for motion deinterlacer, and others. The special color processing technology provided favorite and natural color for TV. It is a highly integrated SOC IC with an ARM microcontroller core. MT537x support transport de-multiplexer, MPEG-2 video decoder, AC3 audio decoder, LVDS transmitter, TV decoder and HDMI Receiver. It is also integrated with high speed VGA ADC, high resolution Video/Audio ADC, 90db Audio DAC and 12-bit Video DAC. It will provide very fine quality for TV.

The audio processing is processed in WM8776S. It is a high performance, stereo audio codec with 6 channel input selector and is ideal for surround sound processing. It supports fully independent sample for ADC and DAC. Its audio data interface supports I²S and DSP formats.

9.2 Abbreviations List

CSM	Customer Service Mode
ATSC	Advanced Television Systems Committee, the digital TV standard in the USA
DVD	Digital Versatile Disc
EEPROM	Electrically Erasable and Programmable Read Only Memory
3DNR	Temporal (3D) Noise Reduction
AGC	Automatic Gain Control: algorithm that controls the video input of the feature box
FM	Field Memory or Frequency Modulation
AM	Amplitude Modulation
AP	Asia Pacific
ASF	Auto Screen Fit: algorithm that adapts aspect ratio to remove horizontal black bars without discarding video information
ATV	See Auto TV
Auto TV	A hardware and software control system that measures picture content, and adapts image parameters in a dynamic way
AV	External Audio Video
AVIP	Audio Video Input Processor
B/G	Monochrome TV system. Sound carrier distance is 5.5 MHz
ComPair	Computer aided rePair
CP	Connected Planet / Copy Protection
CSS	Content Scrambling System; An encryption method for MPEG-2 video on DVDs. The algorithm and keys required to decode the disc are stored on the DVD-player
CVBS	Composite Video Blanking and Synchronization
DFU	Directions For Use: owner's manual
DNR	Digital Noise Reduction: noise reduction feature of the set
DSP	Digital Signal Processing
DST	Dealer Service Tool: special remote control designed for service technicians
DTCP	Digital Transmission Content Protection; A protocol for protecting digital audio/video content that is traversing a high speed serial bus, such as IEEE-1394
DVI(-d)	Digital Visual Interface (d= digital only)
EAS	Emergency Alert Signalling; A cable TV standard (SCTE18) to signal emergency information to digital terminal devices
E-DDC	Enhanced Display Data Channel (VESA standard for communication channel and display). Using E-DDC, the video source can read the EDID information from the display.
EDID	Extended Display Identification Data (VESA standard)
EMI	Electro Magnetic Interference
EMM	Entitlement Management Message
EPLD	Erasable Programmable Logic Device
EU	Europe
FBL	Fast BLanking: DC signal accompanying RGB signals
FDS	Full Dual Screen (same as FDW)
FDW	Full Dual Window (same as FDS)
FLASH	FLASH memory
FTV	Flat TeleVision
H	H_sync to the module
HD	High Definition
HDD	Hard Disk Drive

NTSC	National Television Standard Committee. Color system mainly used in North America and Japan. Color carrier NTSC M/N= 3.579545 MHz, NTSC 4.43= 4.433619 MHz (this is a VCR norm, it is not transmitted off-air)
NVM	Non-Volatile Memory: IC containing TV related data such as alignments
OSD	On Screen Display
PLL	Phase Locked Loop. Used for e.g.
LVDS	Low Voltage Differential Signalling
PAL	Phase Alternating Line. Color system mainly used in West Europe (color carrier= 4.433619 MHz) and South America (color carrier PAL M= 3.575612 MHz and PAL N= 3.582056MHz)
PCB	Printed Circuit Board (same as PWB)
PCM	Pulse Code Modulation
PWB	Printed Wiring Board (same as "PCB")
PWM	Pulse Width Modulation
QAM	Quadrature Amplitude Modulation; modulation method
RAM	Random Access Memory
RGB	Red, Green, and Blue. The primary color signals for TV. By mixing levels of R, G, and B, all colors (Y/C) are reproduced.
RC	Remote Control RC5 / RC6 Signal protocol from the remote control receiver
RESET	RESET signal
ROM	Read Only Memory
SAM	Service Alignment Mode
SCART	Syndicat des Constructeurs d'Appareils Radiorecepteurs et Televisieurs
SCL	Serial Clock I2C
SCL-F	CLock Signal on Fast I2C bus
SD	Standard Definition
SDA	Serial Data I2C
SDA-F	DAta Signal on Fast I2C bus
SDI	Serial Digital Interface, see "ITU-656"
SDRAM	Synchronous DRAM
SECAM	SEquence Couleur Avec Memoire. Color system mainly used in France and East Europe. Color carriers= 4.406250 MHz and 4.250000 MHz
SIF	Sound Intermediate Frequency
SMPS	Switched Mode Power Supply
SOG	Sync On Green
SOPS	Self Oscillating Power Supply
I2C	Integrated IC bus
I2D	Integrated IC Data bus
I2S	Integrated IC Sound bus
IB	In Band channel
IF	Intermediate Frequency
Interlaced	Scan mode where two fields are used to form one frame. Each field contains half the number of the total amount of lines. The fields are written in "pairs", causing line flicker.
IR	Infra Red
IRQ	Interrupt Request
LATAM	Latin America
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LPL	LG.Philips LCD (supplier)
MUTE	MUTE Line

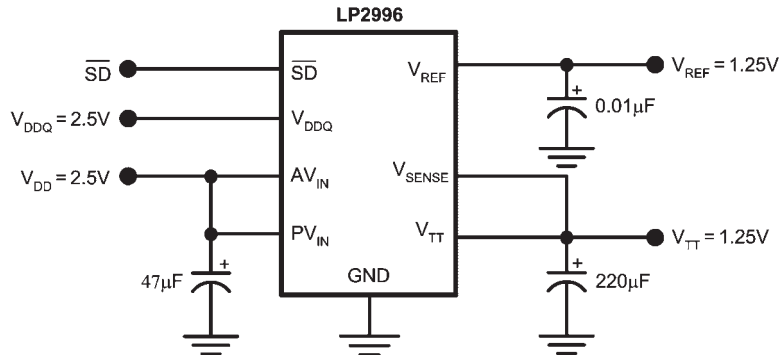
TFT	Thin Film Transistor
SRAM	Static RAM
STBY	STandBY
SOG	Sync On Green
SVGA	800x600 (4:3)
SVHS	Super Video Home System
SW	Software
SWAN	Spatial temporal Weighted Averaging Noise reduction
SXGA	1280x1024
TMD5	Transmission Minimized Differential Signalling
UXGA	1600x1200 (4:3)
V	V-sync to the module
VCR	Video Cassette Recorder
VESA	Video Electronics Standards Association
VGA	640x480 (4:3)
VL	Variable Level out: processed audio output toward external amplifier
VSB	Vestigial Side Band; modulation method
WYSIWYR	What You See Is What You Record: record selection that follows main picture and sound
WXGA	1280x768 (15:9)
XGA	1024x768 (4:3)
Y	Luminance signal
YPbPr	Component video. Luminance and scaled color difference signals (B-Y and R-Y)

9.3 IC Data Sheets

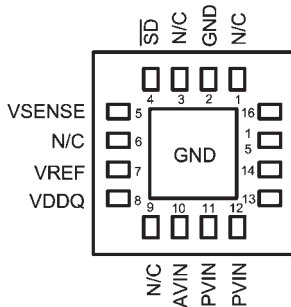
This section shows the internal block diagrams and pin configurations of ICs that are drawn as "black boxes" in the electrical diagrams (with the exception of "memory" and "logic" ICs).

9.3.1 IC Data Sheets-LP2996(U503)

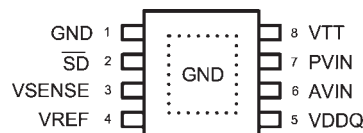
Typical Application Circuit



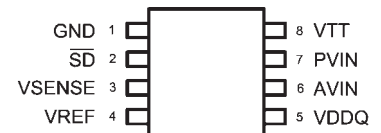
Pin Configuration



LLP-16 Layout



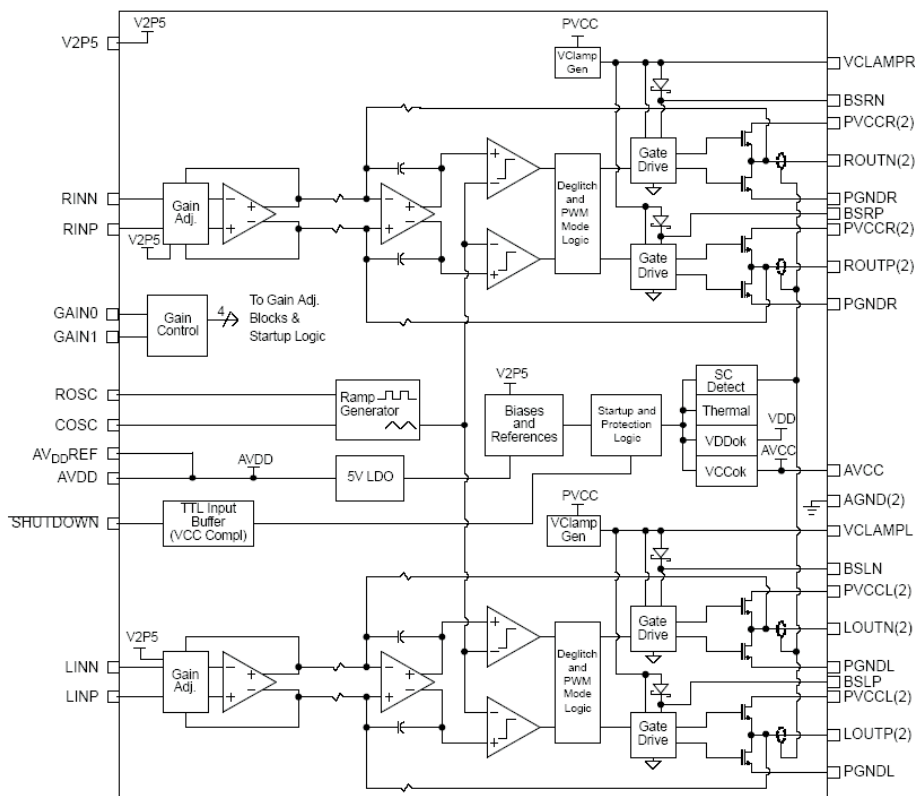
PSOP-8 Layout



SO-8 Layout

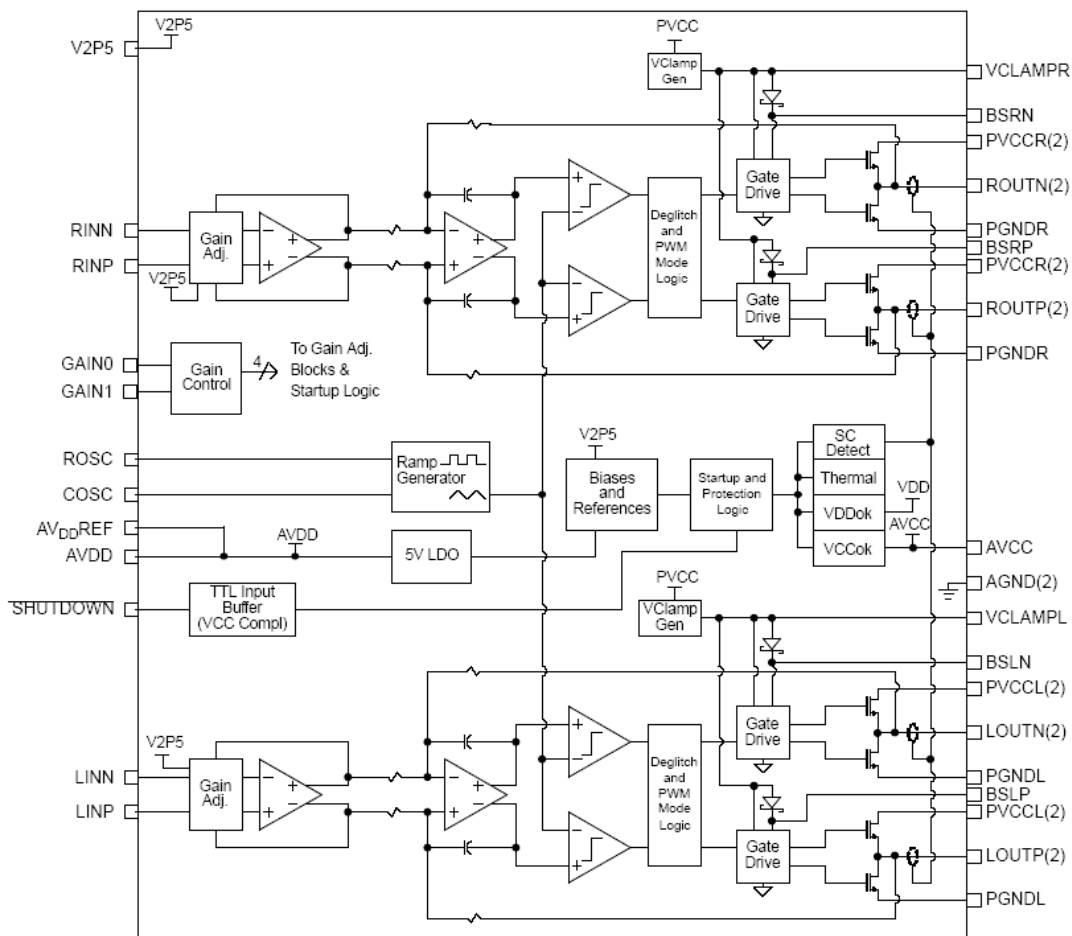
9.3.2 IC Data Sheets-TPA3005D2(U801)

FUNCTIONAL BLOCK DIAGRAM

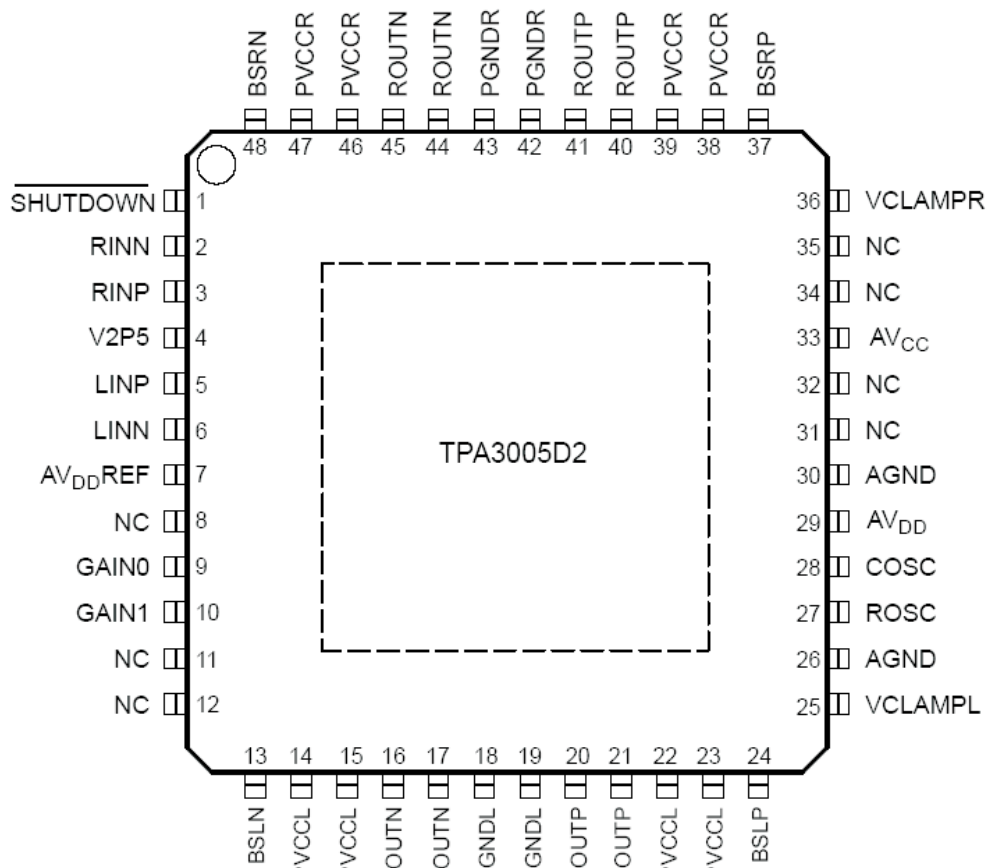


9.3.2 IC Data Sheets-TPA3005D2(U801)

FUNCTIONAL BLOCK DIAGRAM

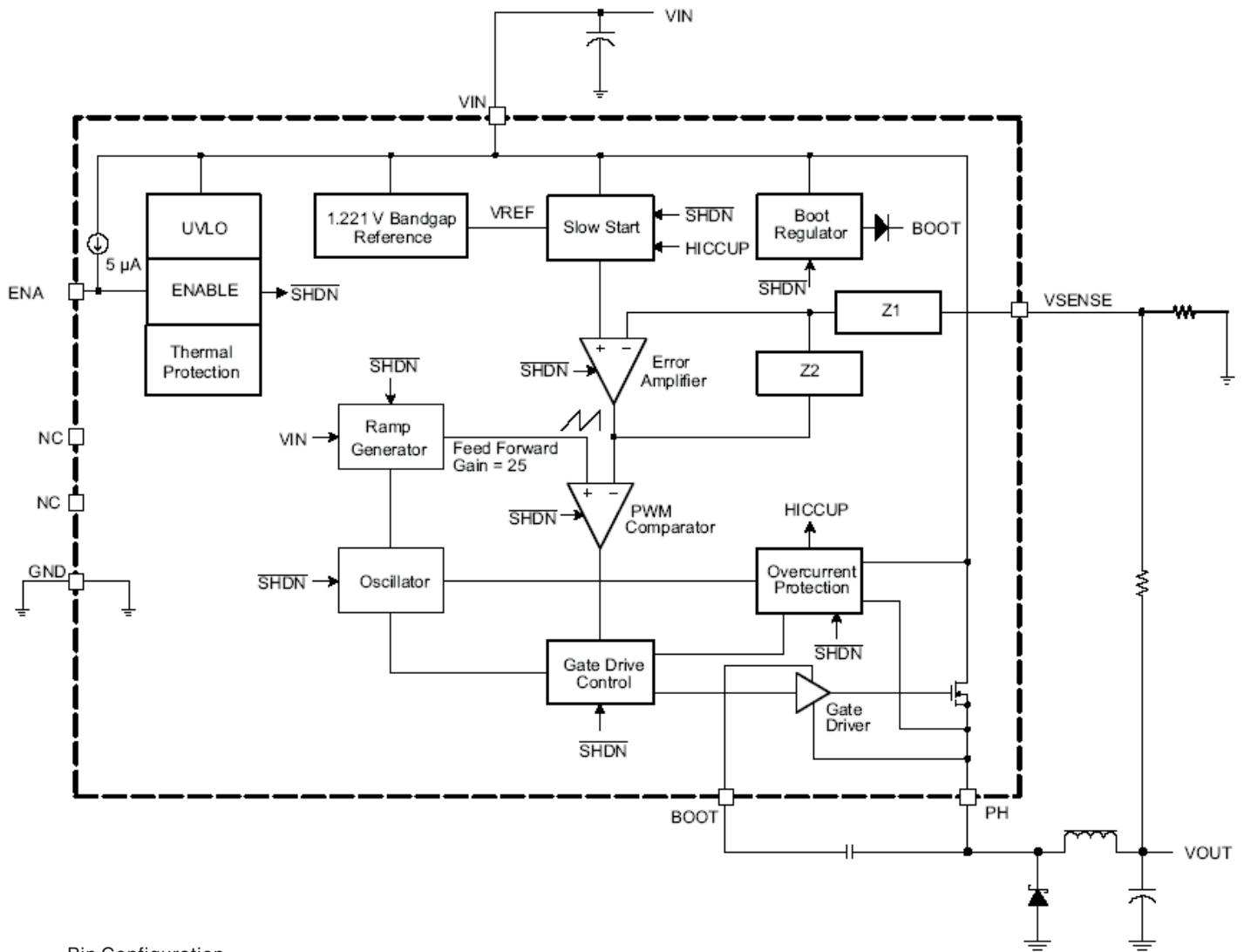


Pin Configuration

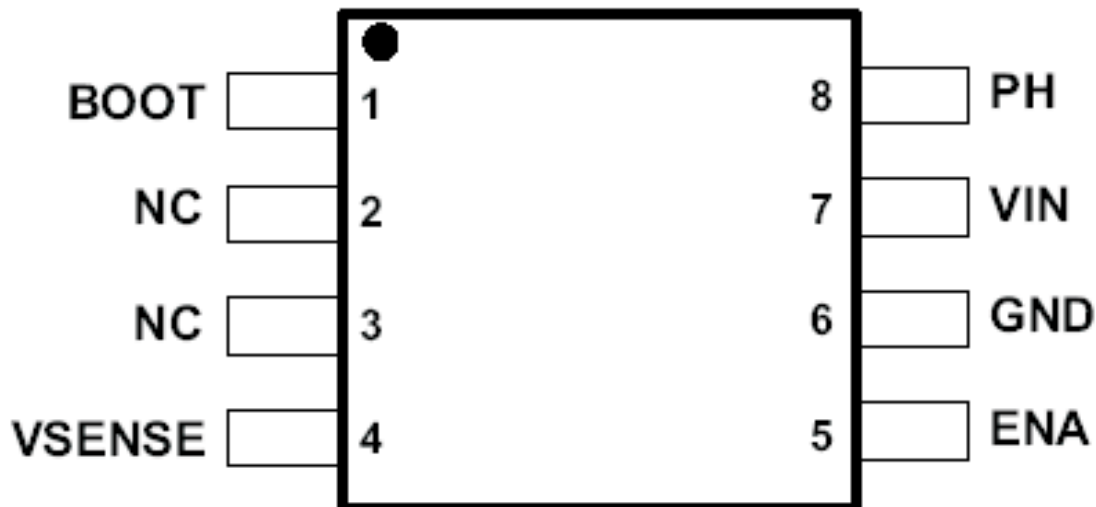


9.3.3 IC Data Sheets-TPS5420(U102)

Function Diagram

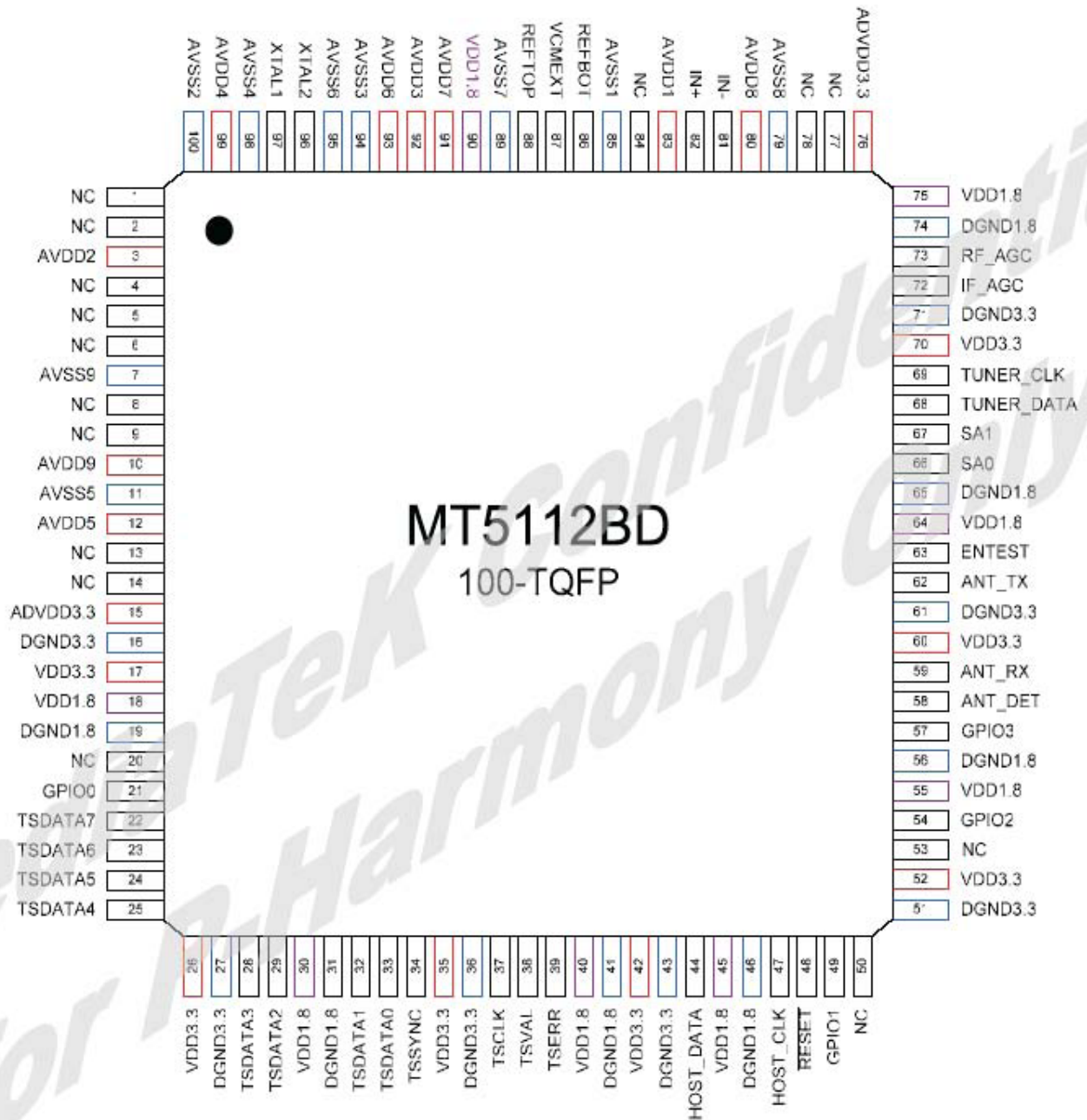


Pin Configuration



9.3.4 IC Data Sheets-MT5112BD(U250)

Pin Configuration



9.3.5 IC Data Sheets-MT5371AJ(U301)

PIN ASSIGNMENT (MT5372, MT5371)

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
A	RA13	RA1	RA5	RA9	RA12	RDQ29	RDQS3_	RDQ25	RDQ21	RDQS2_	RCLK1	RDQ20	GPIO_3	GPIO7	GPIO_11
B	RA8	RA11	RA10	RA3	RA7	RDQ26	RDQS3	RDQ27	RDQ18	RDQS2	RCLK1_	GPIO_0	GPIO_4	GPIO_8	GPIO_12
C	RA4	RA6	RBA1	RRAS_	RCAS_	RDQ24	RDQM3	RDQ28	RDQ16	RDQM2	RDQ17	GPIO_1	GPIO_5	GPIO_9	JTRST_
D	RA0	RA2	RWE_	RBA0	RCS_	RDQ31	RDQ30	RVREF	RDQ23	RDQ22	RDQ19	GPIO_2	GPIO_6	GPIO_10	JTDI
E	RCKE	RODT	RDQ4	RDQ3	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO
F	RDQ1	RDQ6	RDQM0	RVREF	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO	VCC2IO
G	RDQS0	RDQS0_	RDQ7	RDQ0	VCC2IO	VCC2IO									
H	RDQ2	RDQ5	RDQ12	RDQ11	VCC2IO	VCC2IO									
J	RDQ9	RDQ14	RDQS1_	RDQS1	VCC2IO	VCC2IO									
K	RDQM1	RDQ15	RDQ8	RDQ10	VCC2IO	VCC2IO									
L	RCLK0	RCLK0_	RDQ13	REXTUP	VCC2IO	VCC2IO									
M	REXTDN	PDCE1_	PDCE1	PDCE2	VCC2IO	VCC2IO									
N	PDVS1	PDOE_	PDIORD	PDIOWR	VCC3IO	VCC3IO									
P	PDWE_	PDIREQ_	PDCTRLVP	PDVS2	VCC3IO	VCC3IO									
R	PDRESET	PDWAIT	PDINPACK	PDREG_	VCC3IO	VCC3IO									
T	PDIOIS16	PDCE2_	PDENPOD	POCE2_	VCC2IO	VCC2IO									
U	POCE1_	POOE_	POCE0_	PDA1	VCC2IO	VCC2IO									
V	PDD0	PDD1	PDD2	PDD3	VCC2IO	VCC2IO									
W	PDD4	PDD5	PDD6	PDD7											
Y	PDA0	PDA17	PDA16	PDA15											
AA	PDA14	PDA13	PDA12	PDA11											
AB	PDA10	PDA9	PDA20	PDA21											
AC	POWE_	PDA22	PDA19	PDA18											
AD	PDA8	PDA7	PDA6	PDA5											
AE	PDA4	PDA3	PDA2	IDD8											
AF	IIORDY	IDD9	IDD10	IDD11		VCC3IO	VCC3IO	VCC3IO	VCC3IO						VCC2IO
AG	IDD12	IDD13	IDD14	IDD15	MDATA0	SDIOD2	OPWM1	OSDA1	OWRP2	PGND	AVSS_HC	AVSS_H0	AVSS_H1	AVSS_H2	OPCTRL4
AH	IDIOR_	IDIOW_	IDA2	SDIOCMD	DCLK	SDIOD3	OPWM0	OSDA0	OSCL2	PVCC	AVCC_HC	AVCC_H0	AVCC_H1	AVCC_H2	OPCTRL5
AJ	IDA1	IINTRQ	IDA0	SDIOD0	MCLK	OIRO	PWR5V	OSCL0	OSDA2	CVCC12	RXC_B	RX0B	RX1B	RX2B	OPCTRL6
AK	IRESET	ICS0_	ICS1_	SDIOCLK	SMCE_	MDATA1	SDIOD1	OPWM2	OSCL1	EXT_RES	RXC	RX0	RX1	RX2	OPCTRL7
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

	11	12	13	14	15
L					
M					
N					
P					
R					
T					
U					
V					
W					
Y					
	11	12	13	14	15

 DDR SIGNAL (120)

 VCC2IO CORE POWER 1.2V

 xxxx Analog Power

 NOR Flash / POD (54)

 VCC2IO DDR POWER 2.5V / 1.8V

 xxxx Analog Ground

 ATA/CF/MS/SD/XD/SDIO (29)

 VCC3IO IO POWER 3.3V

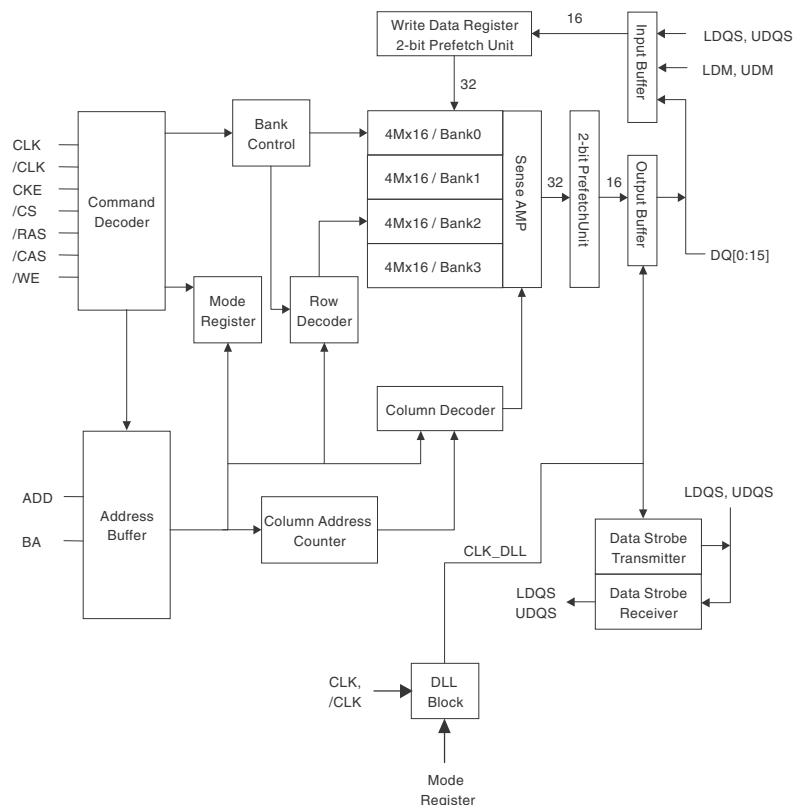
 GPIO

 Digital GND

16	17	18	19	20	21	22	23	24	25	26	27	28	29	30						
JTDO	A0P	A1P	A2P	CK1P	A3P	LVDD0B	TP3	DACVREF	R	G	B	SVM	ELREQ	ECLK	A					
JRTCK	A0N	A1N	A2N	CK1N	A3N	LVDD0C	TN3	AVCC_VREFS		DACVDDC	DACVDDB	DACVDDA	EDATA0	EDATA1	B					
JTMS	A4P	A5P	A6P	CK2P	A7P	LVSS0B	LVDD0A	DACVSSC	DACVSSA	U2CTS	U2RX	ELPS	EDATA2	EDATA3	C					
JTCK	A4N	A5N	A6N	CK2N	A7N	LVSS0C	LVSS0A	AVSS_VREFS	DACVSSB	U2RTS	U2TX	ECNTL0	EDATA4	EDATA5	D					
VCC3IO	VCC3IO	VCC3IO										ELINKON	ECNTL1	EDATA6	EDATA7	E				
VCC3IO	VCC3IO	VCC3IO								VCCK	T0DATA2	T0DATA3	T0DATA4	T0DATA0	F					
										VCCK	T0DATA6	T0DATA7	T0SYNC	T0DATA1	G					
										VCCK	AOSDATA1	T0VALID	T0CLK	T0DATA5	H					
										VCCK	AOSDATA1	AOBCK	AOMCLK	AOLRCK	J					
										VCCK	AOSDATA1	AO2BCK	AO2MCLK	AOSDATA1	K					
										VCC3IO	AO2SDATA1	ALIN	ASPDIF	AOSDATA1	L					
										VCC3IO	GPIO_14	GPIO_15	GPIO_16	AO2LRCK	M					
										VCC3IO	GPIO_13	AVSS0_	ADAC	AVSS1_	ADAC	N				
										VCC3IO	GPIO_20	ADAC_VCM	AR2	AL2	P					
										AVCC_DV	GPIO_19	AVCC0_	ADAC	AR1	AL1	R				
											GPIO_18	AVSS_	AADC	MPX2	MPX1	T				
											GPIO_17	AVCC_	AADC	TN2	TP2	U				
											AVSS_	VFE0	AVCC_	VFE0	CVBS1	CVBS0	V			
											AVSS_	VAD0	AVCC_	VAD0	CVBS3	CVBS2	W			
											AVSS_	VAD1	AVCC_	VAD1	SC0	SY0	Y			
											AVSS_	VFE1	AVCC_	VFE1	SC1	SY1	AA			
											AVSS_	AV33	AVCC_	AV33	SC2	SY2	AB			
											TN1	TP1	PR1N	PR1P	AC					
											AVSS_	B2RPPLL	AVSS_	APLL	PB1N	PB1P	AD			
											AVSS_	SYSPPLL	SOY1	Y1N	Y1P	AE				
											AVSS_	ADCPLL	AVCC_	APLL	PR0N	PR0P	AF			
VCCK	VCCK	XREGVSS	VCCK	VCCK																
OPCTRL0	U0RX	U0TX	ADIN2	ADIN4	VID7	VID3	VIVCLK	AVSS_	HDMIPLL	PSCANPLL	AVSS_	DMPLL	AVSS_	CPUPPLL	PB0N	PB0P	AG			
OPCTRL1	ORESET	XREGVDD	PWM2VRE	ADIN3	AVSS_	SR	VID4	VID0	AVCC_	HDMIPLL	AVCC_	CPUPPLL	FB_IN	AVCC_	ADCPLL	AVCC_	SYSPPLL	Y0N	Y0P	AH
OPCTRL2	OIRI	C_XREG	ADIN1	XTALI	AVSS_	XTA	VID5	VID1	PSCANPLL	TN0	VSYNC	BN	GN	SOG	SOY0					AJ
OPCTRL3	OPWRSB	AVCC_	SR	ADIN0	XTALO	AVCC_	XTA	VID6	VID2	AVCC_	D	MPLL	TP0	HSYNC	BP	GP	RN	RP		AK
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	AL					

9.3.6 IC Data Sheets-HY5DU561622ETP-5(U501)

Function Diagram

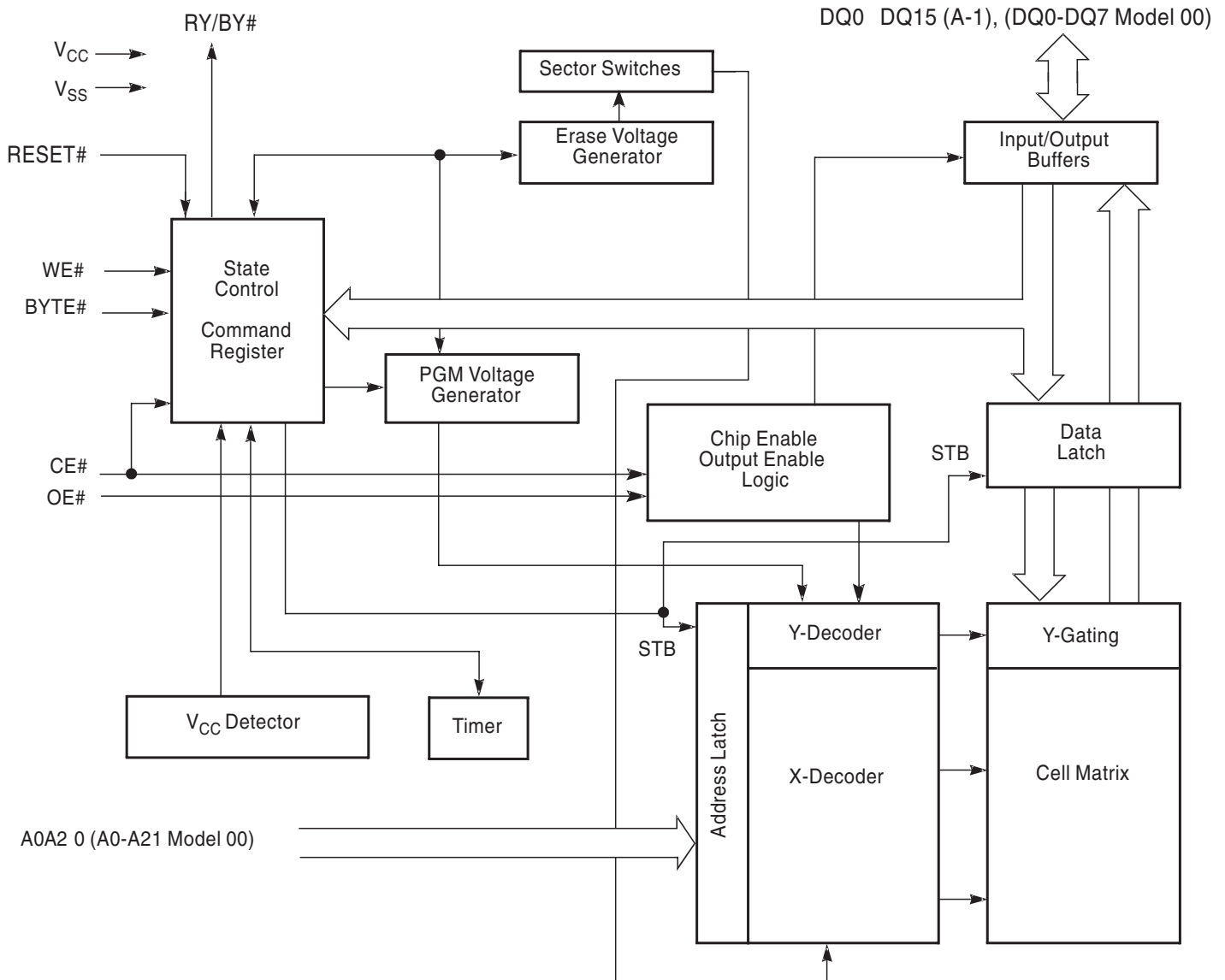


Pin Configuration

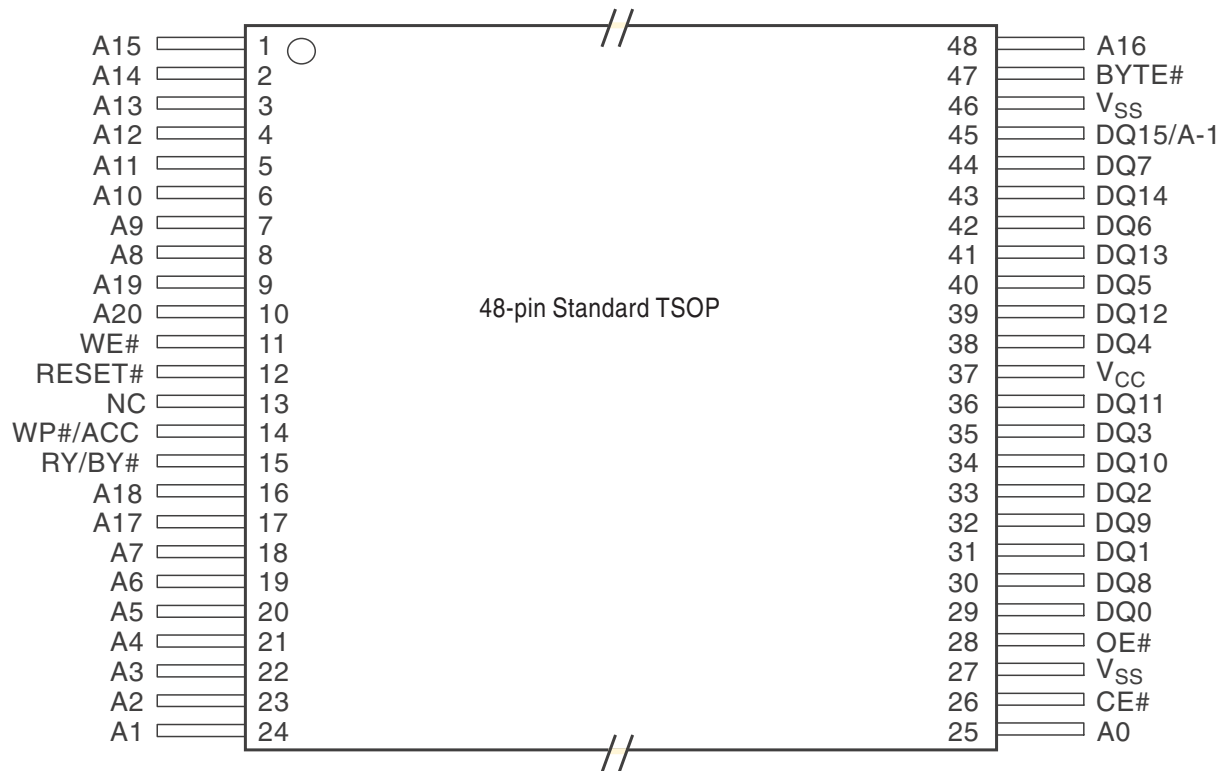
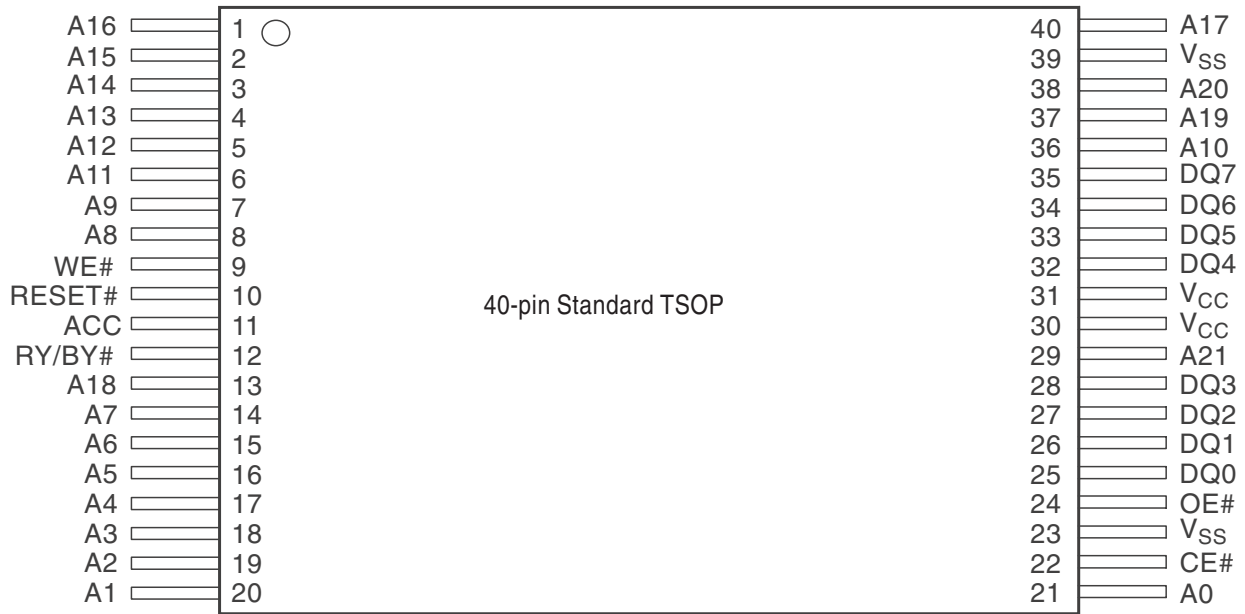
x8	x16				x16	x8
VDD	VDD	1		66	VSS	VSS
DQ0	DQ0	2		65	DQ15	DQ7
VDDQ	VDDQ	3		64	VSSQ	VSSQ
NC	DQ1	4		63	DQ14	NC
DQ1	DQ2	5		62	DQ13	DQ6
VSSQ	VSSQ	6		61	VDDQ	VDDQ
NC	DQ3	7		60	DQ12	NC
DQ2	DQ4	8		59	DQ11	DQ5
VDDQ	VDDQ	9		58	VSSQ	VSSQ
NC	DQ5	10		57	DQ10	NC
DQ3	DQ6	11		56	DQ9	DQ4
VSSQ	VSSQ	12		55	VDDQ	VDDQ
NC	DQ7	13		54	DQ8	NC
NC	NC	14		53	NC	NC
VDDQ	VDDQ	15	400mil X 875mil	52	VSSQ	VSSQ
NC	LDQS	16	66pin TSOP -II	51	UDQS	DQS
NC	NC	17	0.65mm pin pitch	50	NC	NC
VDD	VDD	18		49	VREF	VREF
NC	NC	19		48	VSS	VSS
NC	LDM	20	(Lead free)	47	UDM	DM
/WE	/WE	21		46	/CK	/CK
/CAS	/CAS	22		45	CK	CK
/RAS	/RAS	23		44	CKE	CKE
/CS	/CS	24		43	NC	NC
NC	NC	25		42	A12	A12
BA0	BA0	26		41	A11	A11
BA1	BA1	27		40	A9	A9
A10/AP	A10/AP	28		39	A8	A8
A0	A0	29		38	A7	A7
A1	A1	30		37	A6	A6
A2	A2	31		36	A5	A5
A3	A3	32		35	A4	A4
VDD	VDD	33		34	VSS	VSS

9.3.7 IC Data Sheets-S29AL032D(U350)

Function Diagram



Pin Configuration



10.Recommended/Spare Parts List

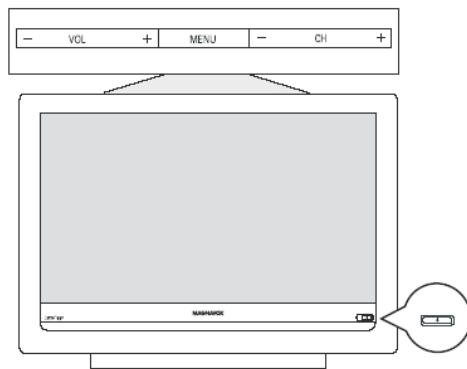
Index of this chapter

10.1 Styling Sheet

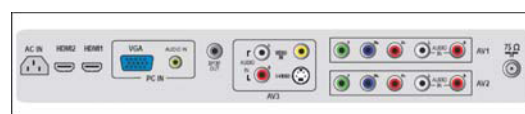
10.2 Recommended Parts List

10.3 Spare Parts List

10.1 Styling Sheet



26MF337B and 32MF337B



R001	9965 000 42218	220Ω 5% 1/10W
R002	9965 000 42219	2.2kΩ 5% 1/10W
R003	9965 000 42214	10kΩ 5% 1/10W
R004	9965 000 42213	100Ω 5% 1/10W
R005	9965 000 42219	2.2kΩ 5% 1/10W
R006	9965 000 42214	10kΩ 5% 1/10W
R007	9965 000 42218	220Ω 5% 1/10W
R008	9965 000 42212	0Ω 5% 1/10W

			
LED001	9965 100 02879	VS L-3WEGW	
			
Q001	9965 000 43944	BC847BW 100mA/45V	
Q001	9965 100 02880	BC847BW 100mA/45V	
Q002	9965 000 43944	BC847BW 100mA/45V	
Q003	9965 000 43944	BC847BW 100mA/45V	
U001	9965 000 42727	TSOP34136SB1	

Keyboard & Control Panel [K]

Various

SW030	9965 000 42278	Switch Tact SKQGAB
SW030	9965 000 42279	Switch SFKQGMA2125
SW031	9965 000 42278	Switch Tact SKQGAB
SW031	9965 000 42279	Switch SFKQGMA2125
SW032	9965 000 42278	Switch Tact SKQGAB
SW032	9965 000 42279	Switch SFKQGMA2125
SW033	9965 000 42278	Switch Tact SKQGAB
SW033	9965 000 42279	Switch SFKQGMA2125
SW034	9965 000 42278	Switch Tact SKQGAB
SW034	9965 000 42279	Switch SFKQGMA2125



C031	9965 000 42228	100nF 16V X7R 0603
CN030	9965 000 45270	Connector 3p m



R030	9965 000 44043	11kΩ 5% 1/10W
R031	9965 000 44045	4.3kΩ 5% 1/10W
R032	9965 000 44044	1.8kΩ 5% 1/10W
R033	9965 000 42224	470Ω 5% 1/10W
R034	9965 000 42212	0Ω 5% 1/10W

Power Supply Unit [P]

Various

F901	9965 000 43852	Fuse 250V 4A
F901	9965 100 02521	Fuse 5A 250V
F901	9965 100 05869	Fuse 4A 250V
FB900	9965 100 02511	Ferr. core 35Ω
FB901	9965 100 02511	Ferr. core 35Ω
FB902	9965 100 02511	Ferr. core 35Ω
FB903	9965 000 43357	Ferrite Bead
FB903	9965 000 43424	Bead coil
FB903	9965 000 43839	Ferrite Bead
FB904	9965 000 43357	Ferrite Bead
FB904	9965 000 43424	Bead coil
FB904	9965 000 43839	Ferrite Bead
FB905	9965 000 43424	Bead coil
FB914	9965 000 40066	Ferr. core BF30TA-2
FB914	9965 100 02511	Ferr. core 35Ω
FB915	9965 000 40066	Ferr. core BF30TA-2
FB915	9965 100 02511	Ferr. core 35Ω
FB917	9965 000 40066	Ferr. core BF30TA-2
FB917	9965 100 02511	Ferr. core 35Ω
FB918	9965 000 40066	Ferr. core BF30TA-2
FB918	9965 100 02511	Ferr. core 35Ω
FB919	9965 000 40066	Ferr. core BF30TA-2
FB919	9965 100 02511	Ferr. core 35Ω
FB920	9965 000 40066	Ferr. core BF30TA-2
FB920	9965 100 02511	Ferr. core 35Ω
FB921	9965 000 40066	Ferr. core BF30TA-2
FB921	9965 100 02511	Ferr. core 35Ω
FB922	9965 000 43357	Ferrite Bead
FB922	9965 000 43839	Ferrite Bead
FB923	9965 000 43357	Ferrite Bead
FB923	9965 000 43839	Ferrite Bead
FB924	9965 000 43357	Ferrite Bead
FB924	9965 000 43839	Ferrite Bead
FB925	9965 000 43357	Ferrite Bead
FB925	9965 000 43839	Ferrite Bead
FB960	9965 100 02511	Ferr. core 35Ω
FB961	9965 100 02511	Ferr. core 35Ω
FB962	9965 100 02511	Ferr. core 35Ω
FB963	9965 100 02511	Ferr. core 35Ω
S900	9965 000 43423	GS41-201MA
S901	9965 000 43423	GS41-201MA
S902	9965 000 43423	GS41-201MA
S903	9965 000 43423	GS41-201MA
SG1	9965 000 43423	GS41-201MA

SG2	9965 000 43423	GS41-201MA
SG3	9965 000 43423	GS41-201MA
SG4	9965 000 43423	GS41-201MA
ZD902	9965 000 43426	Trans Suppr 120V 5W
ZD902	9965 000 43434	P6KE120A DO-15
ZD904	9965 000 43426	Trans Suppr 120V 5W
ZD904	9965 000 43434	P6KE120A DO-15
ZD906	9965 000 44652	P4KE250A
ZD908	9965 000 43427	BZX79-B18 A
ZD908	9965 000 43430	BZX55-B18 A
ZD935	9965 000 43893	RLZ15B
ZD935	9965 000 43895	RLZ15B
ZD938	9965 000 43892	RLZ27B LLDS
ZD965	9965 000 43892	RLZ27B LLDS
ZD966	9965 000 39777	RLZ 13B LLDS
ZD966	9965 000 43894	RLZ13B SEMTECH



C900	9965 000 43824	470pF 10% 250VAC
C900	9965 000 43827	470pF 10% 250VAC
C900	9965 000 43828	470pF 10% 250VAC
C900	9965 000 44612	1500pF 250V
C901	9965 000 43824	470pF 10% 250VAC
C901	9965 000 43827	470pF 10% 250VAC
C901	9965 000 43828	470pF 10% 250VAC
C902	9965 000 43824	470pF 10% 250VAC
C902	9965 000 43906	2200pF 500V
C902	9965 000 43907	2200pF 500V
C902	9965 000 43908	2200pF 500V
C905	9965 000 43348	63G214J225GMC
C905	9965 000 43822	2.2μF 5% 450V
C907	9965 000 43354	220uF 450V
C907	9965 000 43829	120μF 450V
C907	9965 000 43832	120μF 450V
C907	9965 100 02508	220uF 450V
C907	9965 100 02509	220uF 450V
C907	9965 100 03542	180uF 450V
C907	9965 100 03543	180uF 450V
C908	9965 000 37794	Film Capacitor
C908	9965 000 43347	0.68uF 275V
C908	9965 000 43821	0.47μF 275VAC
C908	9965 000 43838	MPX-474K27B15L3
C909	9965 000 37794	Film Capacitor
C909	9965 000 43347	0.68uF 275V
C909	9965 000 43821	0.47μF 275VAC
C909	9965 000 43838	MPX-474K27B15L3
C912	9965 000 36073	1μF 25V 0805
C913	9965 000 44615	1nF 10% 50V 0805
C914	9965 000 36045	0.047uF -10% 50V
C916	9965 000 36041	0.1μF 50V X7R
C916	9965 000 36074	0.33μF 10% 25V 0805
C917	9965 000 36041	0.1μF 50V X7R
C917	9965 000 36045	0.047uF -10% 50V
C917	9965 100 03562	47nF 10% 50V 0805
C918	9965 000 39731	2200pF 20% 250Vac
C918	9965 000 43825	2200pF 20% 250VAC
C918	9965 000 43826	2200pF 20% 250VAC
C919	9965 000 36073	1μF 25V 0805
C920	9965 000 36040	0.1μF 10% 25V
C920	9965 000 43889	560pF 50V 0805
C920	9965 000 43890	560pF 50V 0805
C921	9965 000 43460	100UF -20% 25V
C921	9965 000 43886	2.2μF 16V
C922	9965 000 36040	0.1μF 10% 25V
C922	9965 100 04670	10nF 50V 0805
C923	9965 000 36041	0.1μF 50V X7R
C924	9965 000 36074	0.33μF 10% 25V 0805
C924	9965 000 43883	22pF 50V 0805
C925	9965 000 36041	0.1μF 50V X7R
C926	9965 000 43457	1500pF 1kV
C927	9965 000 37327	1μF 50V Y5V
C927	9965 000 42402	1mF 20% 25V 0805
C927	9965 000 43882	1μF Y5V 0805
C930	9965 000 43885	22nF 1% 25V 0805
C931	9965 000 36996	390pF 50V
C934	9965 000 43909	33μF 50V
C934	9965 000 43910	33μF 50V
C934	9965 100 02505	47uF 25V
C935	9965 000 43348	63G214J225GMC
C935	9965 000 43822	2.2μF 5% 450V
C937	9965 000 36040	0.1μF 10% 25V
C938	9965 000 44617	1uF 5% 450V
C938	9965 000 44618	1uF 5% 450V
C939	9965 100 02495	0.01uF 5% 100V
C939	9965 100 02496	0.01uF 5% 100V
C939	9965 100 03380	0.018uF 5% 100V
C939	9965 100 03381	0.018uF 5% 100V
C940	9965 100 02495	0.01uF 5% 100V
C940	9965 100 02496	0.01uF 5% 100V
C940	9965 100 03581	0.01uF 5% 100V
C942	9965 000 36040	0.1μF 10% 25V
C943	9965 000 36040	0.1μF 10% 25V

C944	9965 000 44620	200pF 10% 500V
C944	9965 100 03584	1500pF 10% 500V
C945	9965 000 43458	1.5nF 10% 500V
C945	9965 100 03584	1500pF 10% 500V
C946	9965 100 02510	2.2uF 50V
C947	9965 000 43462	6.8μF 50V
C947	9965 100 03586	10uF 50V
C948	9965 000 44620	200pF 10% 500V
C950	9965 000 44289	22pF 50V 0805
C951	9965 000 43355	1500uF 35V
C951	9965 000 43884	220pF 50V 0805
C951	9965 100 04045	1500uF 35V
C952	9965 000 43355	1500uF 35V
C952	9965 000 43884	220pF 50V 0805
C952	9965 000 44331	1000uF 35V
C952	9965 100 04045	1500uF 35V
C953	9965 000 43355	1500uF 35V
C953	9965 000 43887	0.33μF 50V
C953	9965 000 44331	1000uF 35V
C953	9965 100 04045	1500uF 35V
C953	9965 100 04695	330nF 10% 50V 0805
C954	9965 000 43461	47uF 35V
C954	9965 000 43909	33μF 50V
C954	9965 000 43910	33μF 50V
C954	9965 100 02507	47uF 35V
C955	9965 000 37327	1μF 50V Y5V
C955	9965 000 44623	2200uF 16V
C956	9965 000 44331	1000uF 35V
C956	9965 100 02498	22nF 5% 100V
C956	9965 100 03341	0.022uF 5% 100V
C957	9965 100 02506	10uF +/-20% 25V
C958	9965 100 02505	47uF 25V
C959	9965 000 43411	470pF 5% 50V
C959	9965 000 43906	2200pF 500V
C959	9965 000 43907	2200pF 500V
C959	9965 000 43908	2200pF 500V
C960	9965 000 43411	470pF 5% 50V
C961	9965 000 36074	0.33μF 10% 25V 0805
C961	9965 000 43823	0.022μF 5% 250V
C962	9965 000 43411	470pF 5% 50V
C964	9965 000 44331	1000uF 35V
C965	9965 000 44331	1000uF 35V
C966	9965 000 44331	1000uF 35V
C971	9965 000 36041	0.1μF 50V X7R
C972	9965 000 43463	1000μF 25V
C972	9965 000 43833	1000μF 16V
C972	9965 000 43834	1000μF 16V
C972	9965 000 43836	1000μF 25V
C973	9965 000 36041	0.1μF 50V X7R
C974	9965 000 36041	0.1μF 50V X7R
C975	9965 000 42603	220μF 35V
C975	9965 000 43830	220μF 35V
C977	9965 000 36997	560pF 50V NPO 0805
C987	9965 000 36041	0.1μF 50V X7R
C987	9965 000 44292	0.1uF 50V 0805
C988	9965 000 36041	0.1μF 50V X7R
C988	9965 000 44292	0.1uF 50V 0805
C991	9965 000 36041	0.1μF 50V X7R
C995	9965 000 43884	220pF 50V 0805
C996	9965 000 43888	0.22μF 50V
CN901	9965 100 04668	Socket AC
CN915	9965 000 43344	Connector 12p m



R901	9965 000 43879	270kΩ 5% 1/4W
R902	9965 000 43879	270kΩ 5% 1/4W
R903	9965 000 43878	240kΩ 5% 1/4W
R910	9965 000 43880	330kΩ 1% 1/4W
R911	9965 000 43880	330kΩ 1% 1/4W
R912	9965 000 43880	330kΩ 1% 1/4W
R913	9965 000 43395	33kΩ 5% 1/8W
R913	9965 000 43400	620Ω 1% 1/8W
R914	9965 000 43398	5.6kΩ 1% 1/8W
R914	9965 000 43876	4.7kΩ 5% 1/8W
R915	9965 000 43395	33kΩ 5% 1/8W
R916	9965 000 43395	33kΩ 5% 1/8W
R917	9965 000 43390	22kΩ 5% 1/8W
R918	9965 000 39756	47k Ohm 5% 1/8W
R918	9965 000 42284	0Ω 1/10W
R918	9965 000 42735	47kΩ 5% 1/8W
R920	9965 000 43902	0.15Ω 1% 1W
R921	9965 000 43877	6.2kΩ 5% 1/8W
R922	9965 000 43380	1kΩ 1/10W
R922	9965 000 43384	12k Ohm -5% 1/8W
R923	9965 000 43393	330Ω 5% 1/8W
R924	9965 000 43395	33kΩ 5% 1/8W
R924	9965 000 43902	0.15Ω 1% 1W
R924	9965 000 44638	0.12Ohm 1% 1W
R925	9965 000 36963	1kΩ 5% 0.1W
R925	9965 000 43874	47Ω 5% 1/8W
R925	9965 000 44294	47Ω 5% 1/8W
R926	9965 000 36987	10Ω 5% 1/4W

R926	9965 000 38141	10 Ω 5% 1/6W	R991	9965 000 43876	4.7k Ω 5% 1/8W	D935	9965 000 40067	RGP10-DO-204AL
R926	9965 000 43902	0.15 Ω 1% 1W	R992	9965 000 42284	0 Ω 1/10W	D935	9965 000 43435	BYT42D
R926	9965 000 44638	0.12Ohm 1% 1W	R994	9965 000 39749	100k Ω 0805	D935	9965 000 43436	RGP10D
R927	9965 000 43881	820k Ω 5% 1/4W	R995	9965 000 43873	39k Ω 1% 1/8W	D950	9965 000 40067	RGP10-DO-204AL
R927	9965 000 44639	180 Ω 5% 2W	R996	9965 000 43875	4.7k Ω 1% 1/8W	D950	9965 000 43435	BYT42D
R927	9965 100 03556	1.5k Ω 5% 1/8W	R998	9965 100 04669	20.5k Ω 1% 1/8W	D950	9965 000 43436	RGP10D
R928	9965 000 43881	820k Ω 5% 1/4W	RV902	9965 000 43346	VDR DC 1MA/510 845V	D951	9965 000 40067	RGP10-DO-204AL
R928	9965 000 44642	8.2k Ω 1% 1/10W	RV902	9965 100 02714	TVR14511KFC4FY	D951	9965 000 43435	BYT42D
R929	9965 000 42735	47k Ω 5% 1/8W	VAR901	9965 100 02714	TVR14511KFC4FY	D951	9965 000 43436	RGP10D
R929	9965 000 43881	820k Ω 5% 1/4W				D953	9965 000 43891	MLL4148 SMD
R930	9965 000 36963	1k Ω 5% 0.1W				D953	9965 100 03321	LL4148-GSO8
R930	9965 000 43868	16k Ω 5% 1/8W				D953	9965 100 05242	LL4148WP
R931	9965 000 42284	0 Ω 1/10W				D955	9965 000 36035	LL4148WP
R932	9965 000 43898	7.5k Ω 5% 1/4W	L901	9965 000 43847	Line Filter 6mH 1.8A	D955	9965 000 39775	LL4148-GS08
R932	9965 000 43901	7.5k Ω 5% 1/6W	L901	9965 000 43848	Line Filter 6mH 2.0A	D955	9965 000 43891	MLL4148 SMD
R932	9965 100 02482	330 Ω 5% 1/6W	L903	9965 000 43840	Choke coil 430mH 0.19W	D955	9965 100 03321	LL4148-GSO8
R933	9965 000 36963	1k Ω 5% 0.1W	L903	9965 000 43843	Choke coil 430 μ H 0.19 Ω	D955	9965 100 05242	LL4148WP
R934	9965 000 43393	330 Ω 5% 1/8W	L903	9965 100 04967	Choke coil 430 μ H 0.19 Ω	D957	9965 000 43426	Trans Suppr 120V 5W
R935	9965 000 43874	47 Ω 5% 1/8W	L910	9965 000 43849	Line Filter 11mH 3.5A	D957	9965 000 43434	P6KE120A DO-15
R936	9965 000 36965	100k Ω 5% 0.1W	L910	9965 000 43850	Line Filter 11mH 3.5A	D958	9965 000 43437	UF1007 1A 1000V
R936	9965 000 43381	10k Ω 1/10W	L910	9965 000 44634	Coil 2.4 μ H 20% 4.5M Ω	D958	9965 000 43438	STTH110
R937	9965 000 43389	2.2k Ω 1% 1/8W	L911	9965 000 44635	Coil 2.3uH 20% 7.2M Ω	D959	9965 000 43426	Trans Suppr 120V 5W
R937	9965 000 43393	330 Ω 5% 1/8W	L912	9965 000 43362	Line Filter 8mH 4.0A	D959	9965 000 43434	P6KE120A DO-15
R938	9965 000 43869	18 Ω 5% 1/8W	L913	9965 000 43362	Line Filter 8mH 4.0A	D960	9965 000 36034	SP10150
R938	9965 000 43876	4.7k Ω 5% 1/8W	L914	9965 000 43358	Filter 300 μ H 0R085	D960	9965 000 43855	MBRF10150CT
R939	9965 000 43381	10k Ω 1/10W	L914	9965 100 03226	Choke 380 μ H 130 Ω	D960	9965 000 43856	MBRF10150CT
R939	9965 000 43387	18k Ω 1% 1/6W	L914	9965 100 03227	Choke 380 μ H 130 Ω	D961	9965 000 36034	SP10150
R940	9965 000 43896	1k Ω 5% 1/4W	L915	9965 000 43425	Coil 47uH 10%	D961	9965 000 43855	MBRF10150CT
R940	9965 000 43899	1k Ω 5% 1/6W	L916	9965 000 43425	Coil 47uH 10%	D961	9965 000 43856	MBRF10150CT
R940	9965 000 44641	1.5k Ω 1% 1/8W	L966	9965 000 43361	15 μ H 10%	D970	9965 000 43853	DIODE SB240 DO-41
R941	9965 000 43389	2.2k Ω 1% 1/8W	L966	9965 000 43845	Choke coil 15 μ H 260M Ω	D970	9965 000 43904	SB240
R942	9965 000 43379	100 Ω 5% 1/8W	L966	9965 000 43846	Choke coil 15 μ H 260M Ω	D970	9965 000 43905	SB240-13-F DO-41
R942	9965 000 43391	33 Ω 5% 1/8W	L966	9965 100 02517	Choke coil 15 μ H 260M Ω	D970	9965 100 02828	SB240
R942	9965 000 43869	18 Ω 5% 1/8W	L970	9965 000 42610	Choke Coil			
R943	9965 000 43389	2.2k Ω 1% 1/8W	L970	9965 000 43841	Choke 35 μ H 10% 82M Ω			
R944	9965 000 44642	8.2k Ω 1% 1/10W	L983	9965 000 43360	10 μ H 10%			
R945	9965 000 44643	330 Ω 1% 1/8W	L983	9965 000 43842	Choke coil 10 μ H 17M Ω			
R946	9965 000 43876	4.7k Ω 5% 1/8W	L983	9965 000 43844	Choke coil 10 μ H 14.6M Ω			
R947	9965 000 39756	47k Ohm 5% 1/8W	L983	9965 100 02516	Choke coil 10 μ H 14.6M Ω			
R947	9965 000 42735	47k Ω 5% 1/8W	T901	9965 000 43851	XFMR PPH6004AL	IC902	9965 000 44633	SG6961
R948	9965 000 36970	1.5k Ω 5% 0.1W	T901	9965 100 02519	HJC-S6197	IC904	9965 000 36353	TEA1507P
R949	9965 000 43420	0.1 Ω 1% 1W	T904	9965 100 02520	XFMR HJC-S6191	IC904	9965 100 03539	TEA1507P/N1
R949	9965 000 43902	0.15 Ω 1% 1W	T905	9965 000 44651	Power transformer	IC907	9965 000 36353	TEA1507P
R950	9965 000 43399	560k Ω 5%/8W	T905	9965 100 03228	XFMR HJC-S6192	IC907	9965 100 03539	TEA1507P/N1
R950	9965 000 43903	0.33 Ω 5% 1W	TH902	9965 000 43454	NTC 0.75 Ω 15%	IC909	9965 000 40055	PC123 Y82FZOF
R951	9965 000 36963	1k Ω 5% 0.1W				IC909	9965 000 40056	TCET1103G
R952	9965 000 43379	100 Ω 5% 1/8W				IC910	9965 000 40055	PC123 Y82FZOF
R952	9965 000 43896	1k Ω 5% 1/4W				IC910	9965 000 40056	TCET1103G
R952	9965 000 43899	1k Ω 5% 1/6W				IC911	9965 000 40055	PC123 Y82FZOF
R953	9965 000 43396	330k Ω 5% 1/8W				IC911	9965 000 40056	TCET1103G
R953	9965 000 43867	150 Ω 5% 1/8W	D901	9965 000 43371	STTH8L06FP	IC912	9965 000 43441	TL431ACZ
R953	9965 000 44295	150 Ω 5% 1/8W	D901	9965 000 43857	STTH5L06FP	IC913	9965 000 43441	TL431ACZ
R954	9965 000 36987	10 Ω 5% 1/4W	D906	9965 100 03321	LL4148-GSO8	IC920	9965 000 43861	UCC28051D
R954	9965 000 38141	10 Ω 5% 1/6W	D906	9965 100 03327	BAS32L	IC950	9965 000 43860	FA5541N
R955	9965 000 43390	22k Ω 5% 1/8W	D907	9965 000 40067	RGP10-DO-204AL	IC970	9965 000 43859	LA5779L-HK
R956	9965 000 44644	150k Ω 1% 1/8W	D907	9965 000 43435	BYT42D	IC990	9965 000 36055	PC123Y22FZOF
R957	9965 000 39749	100k Ω 0805	D907	9965 000 43436	RGP10D	IC990	9965 000 40055	PC123 Y82FZOF
R957	9965 000 43897	130k Ω 5% 1/4W	D908	9965 000 40067	RGP10-DO-204AL	IC990	9965 000 40056	TCET1103G
R957	9965 000 43900	130k Ω 5% 1/6W	D908	9965 000 43435	BYT42D	IC991	9965 000 36055	PC123Y22FZOF
R958	9965 000 43396	330k Ω 5% 1/8W	D908	9965 000 43436	RGP10D	IC991	9965 000 40055	PC123 Y82FZOF
R958	9965 000 45262	300k Ω 5% 1/8W	D910	9965 100 03321	LL4148-GSO8	IC991	9965 000 40056	TCET1103G
R959	9965 100 02488	220k Ω 5% 0.25W	D910	9965 100 03327	BAS32L	IC995	9965 000 36101	AZ431AZ-AE1
R960	9965 100 02488	220k Ω 5% 0.25W	D911	9965 000 40067	RGP10-DO-204AL	IC995	9965 000 43819	TL431CZ-AP
R961	9965 100 02487	180k Ω 5% 0.25W	D911	9965 000 43435	BYT42D	IC995	9965 100 02780	AZ431AZ-AE1
R962	9965 000 42735	47k Ω 5% 1/8W	D911	9965 000 43436	RGP10D	Q901	9965 000 43368	STW18NK80Z
R963	9965 000 43418	2.2 Ω 5% 1/6W	D912	9965 000 40067	RGP10-DO-204AL	Q901	9965 000 43862	Mosfet 20A/600V
R964	9965 000 43418	2.2 Ω 5% 1/6W	D912	9965 000 43435	BYT42D	Q901	9965 000 43863	Mosfet 20A/600V
R965	9965 000 43379	100 Ω 5% 1/8W	D912	9965 000 43436	RGP10D	Q901	9965 000 43864	Mosfet STP10NK80ZFP
R965	9965 000 44647	2.2 Ω 5% 1/4W	D914	9965 100 02829	BAV103	Q901	9965 000 43865	STP25NM60N 20A/600V
R966	9965 000 43379	100 Ω 5% 1/8W	D914	9965 100 02830	BAV103	Q902	9965 000 43369	Transistor 26A 600V
R967	9965 000 43380	1k Ω 1/10W	D915	9965 100 02829	BAV103	Q902	9965 000 43864	Mosfet STP10NK80ZFP
R968	9965 000 39749	100k Ω 0805	D915	9965 100 02830	BAV103	Q902	9965 000 44610	2SK3681-01
R969	9965 000 44648	470k Ω 1% 0.25W	D918	9965 100 02529	BAV21	Q902	9965 100 03548	FCA20N60
R970	9965 000 43896	1k Ω 5% 1/4W	D919	9965 100 02829	BAV103	Q902	9965 100 03550	STW25NM60N
R970	9965 000 43899	1k Ω 5% 1/6W	D919	9965 100 02830	BAV103	Q908	9965 000 44636	STP7NK80ZFP ST
R970	9965 000 44648	470k Ω 1% 0.25W	D920	9965 100 02529	BAV21	Q908	9965 100 02480	2SK3530-01MRSC
R971	9965 000 43870	19.6k Ω 1% 1/8W	D922	9965 000 43373	STPS40H100CW	Q912	9965 000 37785	BC857CG
R971	9965 000 44648	470k Ω 1% 0.25W	D922	9965 100 03554	SP20100R	Q912	9965 000 40046	BC857 SOT23
R972	9965 000 43389	2.2k Ω 1% 1/8W	D922	9965 100 03555	STPS20H100CFP	Q913	9965 000 37785	BC857CG
R972	9965 000 44296	2.2k Ω 1% 1/8W	D924	9965 000 43437	UF1007 1A 1000V	Q913	9965 000 40046	BC857 SOT23
R972	9965 000 44642	8.2k Ω 1% 1/10W	D924	9965 000 43438	STTH110	Q914	9965 000 37785	BC857CG
R973	9965 000 43400	620 Ω 1% 1/8W	D925	9965 000 43437	UF1007 1A 1000V	Q914	9965 000 40046	BC857 SOT23
R974	9965 000 43381	10k Ω 1/10W	D925	9965 000 43438	STTH110	Q915	9965 000 42648	BC847C
R974	9965 000 44297	10k Ω 5% 1/8W	D926	9965 000 43439	DIODE	Q915	9965 000 42649	BC847C
R974	9965 100 02481	0.3 Ω 1% 0.25W	D926	9965 000 43440	SBYV27-200-E3	Q915	9965 100 02479	BC847C
R975	9965 000 43876	4.7k Ω 5% 1/8W	D926	9965 000 43891	MLL4148 SMD	Q916	9965 000 42648	BC847C
R976	9965 000 43874	47 Ω 5% 1/8W	D926	9965 100 03321	LL4148-GSO8	Q916	9965 000 42649	BC847C
R977	9965 000 43976	10 Ω 5% 1/4W	D926	9965 100 05242	LL4148WP	Q916	9965 100 02479	BC847C
R978	9965 000 43396	330k Ω 5% 1/8W	D927	9965 000 44611	SP1060	Q936	9965 000 35967	KEC 2N3906S-RTK/PS
R979	9965 000 36963	1k Ω 5% 0.1W	D927	9965 100 02528	MBRF1060CT	Q936	9965 100 02478	PMBS3906
R979	9965 000 43875	4.7k Ω 1% 1/8W	D929	9965 100 02829	BAV103	Q988	9965 000 36033	RK7002
R980	9965 000 43394	3.3k Ω 5% 1/8W	D929	9965 100 02830	BAV103	Q988	9965 000 42650</	

Q993	9965 000 35966	PMBS3904
Q993	9965 000 36961	KEC 2N3904S-RTK/PS
Q993	9965 000 40045	MMBT3904
BD901	9965 000 43370	GBU8J
BD901	9965 000 43854	DIODE GBU605
BD901	9965 000 43858	Bridge 6A/600V
BD901	9965 000 44288	GBU606
BD901	9965 000 44609	GBU805
BD901	9965 100 03552	GBU605
BD901	9965 100 04061	GBU806
NR901	9965 000 43820	NTC SCK101R55LSY

Scaler Board [S]

Various

0295	9965 100 10001	EEPROM Label-CPT-P
1257	9965 100 02817	Tuner assy
1257	9965 100 02820	Tuner assy
1257	9965 100 03392	Tuner + Eeprom
1257	9965 100 03395	Tuner + Eeprom
1258	9965 000 44580	NOR Flash assy
1258	9965 000 45022	NOR Flash assy
1258	9965 100 02858	NOR Flash assy
1258	9965 100 03398	NOR Flash assy
1258	9965 100 05892	NOR Flash assy
1258	9965 100 05894	NOR Flash assy
1258	9965 100 05895	NOR Flash assy
1258	9965 100 05996	NOR Flash assy
1258	9965 100 06907	NOR Flash assy
1258	9965 100 08018	NOR Flash assy
1258	9965 100 08200	NOR Flash assy
1258	9965 100 08858	NOR Flash assy
1258	9965 100 08985	NOR Flash assy
1258	9965 100 09226	NOR Flash assy
1258	9965 100 09281	NOR Flash assy
1258	9965 100 09636	NOR Flash assy
1258	9965 100 10030	NOR Flash assy
1258	9965 100 10035	NOR Flash assy
1258	9965 100 10239	NOR Flash assy
1301	9965 000 44325	EEPROM Assy
1301	9965 000 44603	EEPROM Assy
1301	9965 000 44787	EEPROM Assy
1301	9965 000 45023	EEPROM Assy
1301	9965 100 05848	EEPROM Assy
1301	9965 100 05849	EEPROM Assy
1301	9965 100 05864	EEPROM Assy
1301	9965 100 05997	EEPROM Assy
1301	9965 100 06908	EEPROM Assy
1301	9965 100 08019	EEPROM Assy
1301	9965 100 08201	EEPROM Assy
1301	9965 100 08859	EEPROM Assy
1301	9965 100 08986	EEPROM Assy
1301	9965 100 09224	EEPROM Assy
1301	9965 100 09637	EEPROM Assy
1301	9965 100 10031	EEPROM Assy
1301	9965 100 10036	EEPROM Assy
1302	9965 000 44327	EEPROM Assy
1302	9965 000 44605	EEPROM Assy
1302	9965 000 44789	EEPROM Assy
1302	9965 000 45025	EEPROM Assy
1302	9965 100 05845	EEPROM Assy
1302	9965 100 05846	EEPROM Assy
1302	9965 100 05847	EEPROM Assy
1302	9965 100 05998	EEPROM Assy
1302	9965 100 06909	EEPROM Assy
1302	9965 100 08020	EEPROM Assy
1302	9965 100 08202	EEPROM Assy
1302	9965 100 08860	EEPROM Assy
1302	9965 100 08987	EEPROM Assy
1302	9965 100 09225	EEPROM Assy
1302	9965 100 09638	EEPROM Assy
1302	9965 100 10032	EEPROM Assy
1302	9965 100 10037	EEPROM Assy
FB150	9965 000 42268	220Ω at 100MHz 0805
FB201	9965 000 42268	220Ω at 100MHz 0805
FB202	9965 000 43996	Bead 120Ω/500mA
FB202	9965 100 02775	Bead 120Ω/500mA
FB202	9965 100 03317	Bead 120Ω/500mA
FB203	9965 000 42268	220Ω at 100MHz 0805
FB250	9965 000 43995	Bead 600Ω/200mA
FB250	9965 000 43997	Bead 600Ω/200mA
FB251	9965 000 43995	Bead 600Ω/200mA
FB251	9965 000 43997	Bead 600Ω/200mA
FB252	9965 000 43995	Bead 600Ω/200mA
FB252	9965 000 43997	Bead 600Ω/200mA
FB253	9965 000 43995	Bead 600Ω/200mA
FB253	9965 000 43997	Bead 600Ω/200mA
FB254	9965 000 42268	220Ω at 100MHz 0805
FB255	9965 000 43995	Bead 600Ω/200mA
FB255	9965 000 43997	Bead 600Ω/200mA
FB256	9965 000 43995	Bead 600Ω/200mA

FB256	9965 000 43997	Bead 600Ω/500mA
FB257	9965 000 43995	Bead 600Ω/200mA
FB257	9965 000 43997	Bead 600Ω/500mA
FB350	9965 000 43995	Bead 600Ω/200mA
FB350	9965 000 43997	Bead 600Ω/500mA
FB351	9965 000 43995	Bead 600Ω/200mA
FB351	9965 000 43997	Bead 600Ω/500mA
FB352	9965 000 43995	Bead 600Ω/200mA
FB352	9965 000 43997	Bead 600Ω/500mA
FB401	9965 000 43995	Bead 600Ω/200mA
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FB402	9965 000 43995	Bead 600Ω/200mA
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FB403	9965 000 43995	Bead 600Ω/200mA
FB403	9965 000 43997	Bead 600Ω/500mA
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FB404	9965 000 43997	Bead 600Ω/500mA
FB405	9965 000 43995	Bead 600Ω/200mA
FB405	9965 000 43997	Bead 600Ω/500mA
FB406	9965 000 43995	Bead 600Ω/200mA
FB406	9965 000 43997	Bead 600Ω/500mA
FB407	9965 000 43995	Bead 600Ω/200mA
FB407	9965 000 43997	Bead 600Ω/500mA
FB408	9965 000 43995	Bead 600Ω/200mA
FB408	9965 000 43997	Bead 600Ω/500mA
FB409	9965 000 43995	Bead 600Ω/200mA
FB409	9965 000 43997	Bead 600Ω/500mA
FB410	9965 000 43995	Bead 600Ω/200mA
FB410	9965 000 43997	Bead 600Ω/500mA
FB411	9965 000 43995	Bead 600Ω/200mA
FB411	9965 000 43997	Bead 600Ω/500mA
FB660	9965 000 43995	Bead 600Ω/200mA
FB660	9965 000 43997	Bead 600Ω/500mA
FB661	9965 000 43995	Bead 600Ω/200mA
FB661	9965 000 43997	Bead 600Ω/500mA
FB662	9965 000 43995	Bead 600Ω/200mA
FB662	9965 000 43997	Bead 600Ω/500mA
FB663	9965 000 43995	Bead 600Ω/200mA
FB663	9965 000 43997	Bead 600Ω/500mA
FB700	9965 000 43995	Bead 600Ω/200mA
FB700	9965 000 43997	Bead 600Ω/500mA
FB701	9965 000 43995	Bead 600Ω/200mA
FB701	9965 000 43997	Bead 600Ω/500mA
FB703	9965 000 42268	220Ω at 100MHz 0805
FB725	9965 000 43995	Bead 600Ω/200mA
FB725	9965 000 43997	Bead 600Ω/500mA
FB726	9965 000 43995	Bead 600Ω/200mA
FB726	9965 000 43997	Bead 600Ω/500mA
FB760	9965 000 43995	Bead 600Ω/200mA
FB760	9965 000 43997	Bead 600Ω/500mA
FB761	9965 000 43995	Bead 600Ω/200mA
FB761	9965 000 43997	Bead 600Ω/500mA
FB801	9965 000 43918	75Ω W6 RH 3.5X10X
FB801	9965 000 43919	80Ω BF30TA 3.5X9X
FB851	9965 000 42268	220Ω at 100MHz 0805
FB852	9965 000 42268	220Ω at 100MHz 0805
FB853	9965 000 42268	220Ω at 100MHz 0805
FB900	9965 000 43995	Bead 600Ω/200mA
FB900	9965 000 43997	Bead 600Ω/500mA
TU201	9965 000 44034	Tuner FQD1236/F
TU202	9965 100 02821	TDQU4-507A
X250	9965 000 44013	Xtal 25MHz 20p HC49/S
X250	9965 000 44014	Xtal 25MHz 20p HC49/S
X250	9965 100 02868	Crystal 25Mhz 20pF
X250	9965 100 02869	Crystal 25Mhz 20pF
X250	9965 100 03276	Xtal 25MHz 20p HC49/S
X250	9965 100 03534	Xtal 25MHz 20p HC49/S
X350	9965 000 44012	Xtal 27MHz 15p
X350	9965 000 44601	Xls/Osc. 27Mhz
X350	9965 000 44602	Crystal 27Mhz
X350	9965 100 02870	Xtal 27Mhz 15pF
X350	9965 100 02871	Xtal 27Mhz 15pF
X350	9965 100 03224	Crystal 27Mhz
X350	9965 100 03536	Crystal 27Mhz
X350	9965 100 05116	Crystal / Osc 27MHz
X350	9965 100 05117	Crystal / Osc 27MHz
ZD100	9965 000 37806	SMD
ZD150	9965 000 37806	SMD
ZD151	9965 000 44008	BZX284-C12
ZD151	9965 100 02872	BZX284-C12
ZD151	9965 100 03537	BZX284-C12
ZD151	9965 100 05862	BZX284-C5V1SOD-110
ZD152	9965 000 37806	SMD
ZD701	9965 000 44006	PDZ24B SOD-323
ZD701	9965 100 02873	PDZ24B
ZD701	9965 100 03538	PDZ24B SOD-323
ZD706	9965 000 44006	PDZ24B SOD-323
ZD706	9965 100 03538	PDZ24B SOD-323

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C100	9965 000 43488	100nF 25V 0603
C101	9965 000 43981	3.9nF 1% 50V 0603

C102	9965 000 43979	1nF 5% 50V 0603
C103	9965 000 43979	1nF 5% 50V 0603
C104	9965 000 42259	100pF 50V 0603
C105	9965 000 43980	100nF 20% 25V 0603
C106	9965 000 42259	100pF 50V 0603
C107	9965 000 43488	100nF 25V 0603
C108	9965 000 35998	220uF 16V
C108	9965 000 43916	470μF 20% 25V
C109	9965 000 43488	100nF 25V 0603
C110	9965 000 42402	1mF 5% 50V 0805
C111	9965 000 43488	100nF 25V 0603
C112	9965 000 43985	1μF 20% 16V
C113	9965 100 03699	220uF 25V
C113	9965 100 05107	2200uF 25V
C114	9965 000 43981	3.9nF 1% 50V 0603
C116	9965 000 43488	100nF 25V 0603
C117	9965 000 43980	100nF 20% 25V 0603
C118	9965 000 43979	1nF 5% 50V 0603
C119	9965 000 43979	1nF 5% 50V 0603
C120	9965 000 42260	10nF 50V X7R 0603
C121	9965 000 43488	100nF 25V 0603
C122	9965 000 43488	100nF 25V 0603
C123	9965 000 43979	1nF 5% 50V 0603
C124	9965 000 37776	100μF 25V
C124	9965 000 43645	100μF 25V
C124	9965 100 08191	100uF 16V
C124	9965 100 08192	100uF 16V
C125	9965 000 35998	220uF 16V
C125	9965 000 43916	470μF 20% 25V
C126	9965 000 43981	3.9nF 1% 50V 0603
C127	9965 000 43916	470μF 20% 25V
C127	9965 000 44823	470uF 16V
C128	9965 000 43981	3.9nF 1% 50V 0603
C129	9965 000 42262	100nF 50V Y5V 0603
C130	9965 000 42235	47μF 25V 6.3X5.3mm
C130	9965 100 03679	47uF 16V
C130	9965 100 03680	47uF 16V
C130	9965 100 03697	47uF 25V
C130	9965 100 05108	47uF 25V
C130	9965 100 08199	47uF 16V
C131	9965 000 43913	470μF 35V
C131	9965 000 43914	470μF 35V
C132	9965 000 43980	100nF 20% 25V 0603
C133	9965 000 43980	100nF 20% 25V 0603
C133	9965 100 06906	4.7F 20% 10V
C134	9965 000 42231	330pF 50V NPO 0603
C150	9965 000 42235	47μF 25V 6.3X5.3mm
C150	9965 100 03679	47uF 16V
C150	9965 100 03680	47uF 16V
C150	9965 100 03697	47uF 25V
C150	9965 100 05108	47uF 25V
C150	9965 100 08199	47uF 16V
C151	9965 000 43980	100nF 20% 25V 0603
C152	9965 000 35998	220uF 16V
C152	9965 000 43917	1000μF 25V
C153	9965 000 43913	470μF 35V
C154	9965 100 03677	470uF 25V
C155	9965 000 42235	47μF 25V 6.3X5.3mm
C155	9965 100 03679	47uF 16V
C155	9965 100 03680	47uF 16V
C155	9965 100 03697	47uF 25V
C155	9965 100 05108	47uF 25V
C155	9965 100 08199	47uF 16V
C156	9965 000 43980	100nF 20% 25V 0603
C157	9965 000 42698	10μF 16V 20% 1206
C158	9965 000 43980	100nF 20% 25V 0603
C159	9965 000 42235	47μF 25V 6.3X5.3mm
C159	9965 100 03679	47uF 16V
C159	9965 100 03680	47uF 16V
C159	9965 100 03697	47uF 25V
C159	9965 100 05108	47uF 25V
C159	9965 100 08199	47uF 16V
C160	9965 000 43980	10

C170	9965 000 42262	100nF 50V Y5V 0603	C351	9965 100 09686	10F 16V 1206	C446	9965 000 42228	100nF 16V X7R 0603
C171	9965 000 42260	10nF 50V X7R 0603	C353	9965 000 42228	100nF 16V X7R 0603	C447	9965 000 42228	100nF 16V X7R 0603
C172	9965 000 43991	47F 35V	C354	9965 000 42228	100nF 16V X7R 0603	C448	9965 000 42228	100nF 16V X7R 0603
C173	9965 000 35998	220uF 16V	C355	9965 000 42260	10nF 50V X7R 0603	C449	9965 000 42228	100nF 16V X7R 0603
C173	9965 000 37774	470uF 16V	C356	9965 000 43977	1nF 5% 25V 0603	C450	9965 000 44016	10uF 10% 16V
C174	9965 000 42231	330pF 50V NPO 0603	C357	9965 000 42690	47pF 50V NPO 5% 0603	C450	9965 000 44017	10uF 20% 16V
C175	9965 000 42262	100nF 50V Y5V 0603	C358	9965 000 42229	22pF 50V NPO 0603	C450	9965 000 44018	10uF 10% 16V
C176	9965 000 42260	10nF 50V X7R 0603	C359	9965 000 42403	10uF 25V 20% 1210	C450	9965 000 44019	CER 10U 10V X7R 10%
C201	9965 000 42228	100nF 16V X7R 0603	C359	9965 100 08198	10uF 10V 0805	C450	9965 000 44020	10uF 10% 10V
C202	9965 000 37776	100uF 25V	C359	9965 100 09685	10F 10V	C450	9965 000 45057	10uF 10% 16V
C202	9965 000 43645	100uF 25V	C360	9965 000 42403	10uF 25V 20% 1210	C451	9965 000 42228	100nF 16V X7R 0603
C202	9965 100 08191	100uF 16V	C360	9965 100 08198	10uF 10V 0805	C452	9965 000 42228	100nF 16V X7R 0603
C202	9965 100 08192	100uF 16V	C360	9965 100 09685	10F 10V	C453	9965 000 42228	100nF 16V X7R 0603
C203	9965 000 37776	100uF 25V	C361	9965 000 42228	100nF 16V X7R 0603	C454	9965 000 42228	100nF 16V X7R 0603
C203	9965 000 43645	100uF 25V	C362	9965 000 43978	10pF 5% 50V 0603	C455	9965 000 42228	100nF 16V X7R 0603
C204	9965 000 42260	10nF 50V X7R 0603	C363	9965 000 42260	10nF 50V X7R 0603	C456	9965 000 42228	100nF 16V X7R 0603
C205	9965 000 42403	10uF 25V 20% 1210	C364	9965 000 42260	10nF 50V X7R 0603	C457	9965 000 42228	100nF 16V X7R 0603
C205	9965 100 08198	10uF 10V 0805	C365	9965 000 42260	10nF 50V X7R 0603	C458	9965 000 42228	100nF 16V X7R 0603
C205	9965 100 09685	10F 10V	C366	9965 000 42260	10nF 50V X7R 0603	C459	9965 000 42228	100nF 16V X7R 0603
C206	9965 000 42228	100nF 16V X7R 0603	C367	9965 000 42260	10nF 50V X7R 0603	C460	9965 000 42228	100nF 16V X7R 0603
C207	9965 000 42232	47nF 16V X7R 0603	C368	9965 000 42260	10nF 50V X7R 0603	C461	9965 000 44016	10uF 10% 16V
C208	9965 000 42678	15pF -5% 50V 0603	C371	9965 000 42260	10nF 50V X7R 0603	C461	9965 000 44017	10uF 20% 16V
C209	9965 000 42678	15pF -5% 50V 0603	C372	9965 000 42260	10nF 50V X7R 0603	C461	9965 000 44018	10uF 10% 16V
C210	9965 000 42690	47pF 50V NPO 5% 0603	C401	9965 000 42228	100nF 16V X7R 0603	C461	9965 000 44019	CER 10U 10V X7R 10%
C211	9965 000 42235	47uF 25V 6.3X5.3mm	C402	9965 000 42228	100nF 16V X7R 0603	C461	9965 000 44020	10uF 10% 10V
C211	9965 100 03679	47uF 16V	C403	9965 000 42228	100nF 16V X7R 0603	C461	9965 000 45057	10uF 10% 16V
C211	9965 100 03680	47uF 16V	C404	9965 000 42228	100nF 16V X7R 0603	C462	9965 000 42228	100nF 16V X7R 0603
C211	9965 100 03697	47uF 25V	C405	9965 000 43988	4.7uF 10% 10V	C463	9965 000 42228	100nF 16V X7R 0603
C211	9965 100 05108	47uF 25V	C405	9965 100 03698	4.7uF +/-10% 10V	C464	9965 000 42228	100nF 16V X7R 0603
C211	9965 100 08199	47uF 16V	C406	9965 000 42228	100nF 16V X7R 0603	C465	9965 000 42228	100nF 16V X7R 0603
C212	9965 000 43984	5.6pF 50V 0603	C407	9965 000 43988	4.7uF 10% 10V	C466	9965 000 42228	100nF 16V X7R 0603
C213	9965 000 42678	15pF -5% 50V 0603	C407	9965 100 03698	4.7uF +/-10% 10V	C467	9965 000 42228	100nF 16V X7R 0603
C214	9965 000 42235	47uF 25V 6.3X5.3mm	C408	9965 000 42228	100nF 16V X7R 0603	C468	9965 000 43988	4.7uF 10% 10V
C214	9965 100 03679	47uF 16V	C409	9965 000 42228	100nF 16V X7R 0603	C468	9965 100 03698	4.7uF +/-10% 10V
C214	9965 100 03680	47uF 16V	C410	9965 000 42228	100nF 16V X7R 0603	C469	9965 000 42228	100nF 16V X7R 0603
C214	9965 100 03697	47uF 25V	C411	9965 000 42228	100nF 16V X7R 0603	C470	9965 000 42228	100nF 16V X7R 0603
C214	9965 100 05108	47uF 25V	C412	9965 000 42228	100nF 16V X7R 0603	C472	9965 000 42228	100nF 16V X7R 0603
C214	9965 100 08199	47uF 16V	C413	9965 000 43916	470uF 20% 25V	C473	9965 000 42228	100nF 16V X7R 0603
C215	9965 000 42228	100nF 16V X7R 0603	C413	9965 100 08191	100uF 16V	C474	9965 000 44022	10uF 10% 16V
C216	9965 000 42260	10nF 50V X7R 0603	C413	9965 100 08192	100uF 16V	C474	9965 000 44023	10uF 10% 10V
C218	9965 000 42228	100nF 16V X7R 0603	C414	9965 000 43988	4.7uF 10% 10V	C474	9965 000 44024	10uF 10% 10V
C250	9965 000 42228	100nF 16V X7R 0603	C414	9965 100 03698	4.7uF +/-10% 10V	C474	9965 100 05856	10uF 16V 10% 1206
C251	9965 000 42232	47nF 16V X7R 0603	C415	9965 000 42228	100nF 16V X7R 0603	C475	9965 100 09686	10F 16V 1206
C252	9965 000 42260	10nF 50V X7R 0603	C416	9965 000 42228	100nF 16V X7R 0603	C475	9965 000 44022	10uF 10% 16V
C254	9965 000 42260	10nF 50V X7R 0603	C417	9965 000 43988	4.7uF 10% 10V	C475	9965 000 44023	10uF 10% 10V
C255	9965 000 42228	100nF 16V X7R 0603	C417	9965 100 03698	4.7uF +/-10% 10V	C475	9965 000 44024	10uF 10% 10V
C256	9965 000 42228	100nF 16V X7R 0603	C418	9965 000 42228	100nF 16V X7R 0603	C475	9965 100 05856	10uF 16V 10% 1206
C257	9965 000 42403	10uF 25V 20% 1210	C419	9965 000 42228	100nF 16V X7R 0603	C475	9965 100 09686	10F 16V 1206
C257	9965 100 08198	10uF 10V 0805	C420	9965 000 42228	100nF 16V X7R 0603	C476	9965 000 44022	10uF 10% 16V
C257	9965 100 09685	10F 10V	C421	9965 000 42228	100nF 16V X7R 0603	C476	9965 000 44023	10uF 10% 10V
C258	9965 000 42228	100nF 16V X7R 0603	C422	9965 000 42403	10uF 25V 20% 1210	C476	9965 000 44024	10uF 10% 10V
C259	9965 000 42228	100nF 16V X7R 0603	C422	9965 100 08198	10uF 10V 0805	C476	9965 100 05856	10uF 16V 10% 1206
C260	9965 000 42680	18pF 50V NPO 5% 0603	C422	9965 100 09685	10F 10V	C476	9965 100 09686	10F 16V 1206
C261	9965 000 42680	18pF 50V NPO 5% 0603	C423	9965 000 42228	100nF 16V X7R 0603	C477	9965 000 44022	10uF 10% 16V
C262	9965 000 42228	100nF 16V X7R 0603	C424	9965 000 42228	100nF 16V X7R 0603	C477	9965 000 44023	10uF 10% 10V
C263	9965 000 42228	100nF 16V X7R 0603	C425	9965 000 42228	100nF 16V X7R 0603	C477	9965 000 44024	10uF 10% 10V
C264	9965 000 42403	10uF 25V 20% 1210	C426	9965 000 42228	100nF 16V X7R 0603	C477	9965 100 05856	10uF 16V 10% 1206
C264	9965 100 08198	10uF 10V 0805	C427	9965 000 44016	10uF 10% 16V	C477	9965 100 09686	10F 16V 1206
C264	9965 100 09685	10F 10V	C427	9965 000 44017	10uF 20% 16V	C501	9965 000 42228	100nF 16V X7R 0603
C265	9965 000 42228	100nF 16V X7R 0603	C427	9965 000 44018	10uF 10% 16V	C502	9965 000 37776	100uF 25V
C266	9965 000 42228	100nF 16V X7R 0603	C427	9965 000 44019	CER 10U 10V X7R 10%	C502	9965 000 43645	100uF 25V
C267	9965 000 42228	100nF 16V X7R 0603	C427	9965 000 44020	10uF 10% 10V	C502	9965 100 08191	100uF 16V
C268	9965 000 42228	100nF 16V X7R 0603	C427	9965 000 45057	10uF 10% 16V	C502	9965 100 08192	100uF 16V
C269	9965 000 42228	100nF 16V X7R 0603	C428	9965 000 43988	4.7uF 10% 10V	C503	9965 100 03699	220uF 25V
C270	9965 000 42228	100nF 16V X7R 0603	C428	9965 100 03698	4.7uF +/-10% 10V	C503	9965 100 05107	2200uF 25V
C271	9965 000 42228	100nF 16V X7R 0603	C429	9965 000 42228	100nF 16V X7R 0603	C503	9965 100 08193	150F 25V
C272	9965 000 42228	100nF 16V X7R 0603	C430	9965 000 42235	47uF 25V 6.3X5.3mm	C503	9965 100 08194	150F 25V
C273	9965 000 42228	100nF 16V X7R 0603	C430	9965 100 03679	47uF 16V	C504	9965 000 42228	100nF 16V X7R 0603
C274	9965 000 42403	10uF 25V 20% 1210	C430	9965 100 03680	47uF 16V	C505	9965 000 42228	100nF 16V X7R 0603
C274	9965 100 08198	10uF 10V 0805	C430	9965 100 03697	47uF 25V	C506	9965 000 42403	10uF 16V 20% 1210
C274	9965 100 09685	10F 10V	C430	9965 100 05108	47uF 25V	C506	9965 100 08198	10uF 10V 0805
C275	9965 000 42228	100nF 16V X7R 0603	C430	9965 100 08199	47uF 16V	C506	9965 100 09685	10F 10V
C276	9965 000 42228	100nF 16V X7R 0603	C431	9965 000 42228	100nF 16V X7R 0603	C507	9965 000 42235	47uF 25V 6.3X5.3mm
C277	9965 000 42228	100nF 16V X7R 0603	C432	9965 000 42228	100nF 16V X7R 0603	C507	9965 100 03679	47uF 16V
C278	9965 000 42228	100nF 16V X7R 0603	C433	9965 000 42228	100nF 16V X7R 0603	C507	9965 100 03680	47uF 16V
C279	9965 000 42228	100nF 16V X7R 0603	C434	9965 000 42403	10uF 25V 20% 1210	C507	9965 100 03697	47uF 25V
C280	9965 000 42228	100nF 16V X7R 0603	C434	9965 100 08198	10uF 10V 0805	C507	9965 100 05108	47uF 25V
C281	9965 000 42403	10uF 25V 20% 1210	C434	9965 100 09685	10F 10V	C507	9965 100 08199	47uF 16V
C281	9965 100 08198	10uF 10V 0805	C435	9965 000 42228	100nF 16V X7R 0603	C508	9965 000 42228	100nF 16V X7R 0603
C281	9965 100 09685	10F 10V	C436	9965 000 42228	100nF 16V X7R 0603	C509	9965 000 42228	100nF 16V X7R 0603
C282	9965 000 42228	100nF 16V X7R 0603	C437	9965 000 42228	100nF 16V X7R 0603	C510	9965 000 42228	100nF 16V X7R 0603
C283	9965 000 42228	100nF 16V X7R 0603	C438	9965 000 42228	100nF 16V X7R 0603	C511	9965 000 42228	100nF 16V X7R 0603
C284	9965 000 42228	100nF 16V X7R 0603	C439	9965 000 42228	100nF 16V X7R 0603	C512	9965 000 42228	100nF 16V X7R 0603
C285	9965 000 42228	100nF 16V X7R 0603	C440	9965 000 42228	100nF 16V X7R 0603	C513	9965 000 42228	100nF 16V X7R 0603
C286	9965 000 42228	100nF 16V X7R 0603	C441	9965 000 42228	100nF 16V X7R 0603	C514	9965 000 42228	100nF 16V X7R 0603
C350	9965 000							

C524	9965 000 42228	100nF 16V X7R 0603	C664	9965 000 43983	47nF 20 50V	C774	9965 100 09685	10F 10V
C525	9965 000 42228	100nF 16V X7R 0603	C665	9965 000 42229	22pF 50V NPO 0603	C775	9965 000 42403	10µF 25V 20% 1210
C526	9965 000 42228	100nF 16V X7R 0603	C666	9965 000 42231	330pF 50V NPO 0603	C775	9965 100 08198	10uF 10V 0805
C527	9965 000 43988	4.7µF 10% 10V	C667	9965 000 42231	330pF 50V NPO 0603	C775	9965 100 09685	10F 10V
C527	9965 100 03698	4.7uF +/-10% 10V	C668	9965 000 43983	47nF 20 50V	C776	9965 000 42403	10µF 25V 20% 1210
C528	9965 000 42228	100nF 16V X7R 0603	C669	9965 000 42690	47pF 50V NPO 5% 0603	C776	9965 100 08198	10uF 10V 0805
C529	9965 000 42228	100nF 16V X7R 0603	C670	9965 000 42231	330pF 50V NPO 0603	C776	9965 100 09685	10F 10V
C530	9965 000 42228	100nF 16V X7R 0603	C671	9965 000 42231	330pF 50V NPO 0603	C777	9965 000 42403	10µF 25V 20% 1210
C531	9965 000 42228	100nF 16V X7R 0603	C672	9965 000 43983	47nF 20 50V	C777	9965 100 08198	10uF 10V 0805
C532	9965 000 42228	100nF 16V X7R 0603	C673	9965 000 43983	47nF 20 50V	C777	9965 100 09685	10F 10V
C533	9965 000 42228	100nF 16V X7R 0603	C674	9965 000 43983	47nF 20 50V	C778	9965 000 42228	100nF 16V X7R 0603
C534	9965 000 42228	100nF 16V X7R 0603	C675	9965 000 42673	10nF 50V Y5V 20% 0603	C779	9965 000 42403	10µF 25V 20% 1210
C535	9965 000 42228	100nF 16V X7R 0603	C676	9965 000 42673	10nF 50V Y5V 20% 0603	C779	9965 100 08198	10uF 10V 0805
C536	9965 000 42228	100nF 16V X7R 0603	C700	9965 000 42228	100nF 16V X7R 0603	C779	9965 100 09685	10F 10V
C537	9965 000 42228	100nF 16V X7R 0603	C701	9965 000 42228	100nF 16V X7R 0603	C780	9965 000 42403	10µF 25V 20% 1210
C538	9965 000 37776	100µF 25V	C702	9965 000 42228	100nF 16V X7R 0603	C780	9965 100 08198	10uF 10V 0805
C538	9965 000 43645	100µF 25V	C703	9965 000 42228	100nF 16V X7R 0603	C780	9965 100 09685	10F 10V
C538	9965 100 08191	100uF 16V	C704	9965 000 42228	100nF 16V X7R 0603	C781	9965 000 42403	10µF 25V 20% 1210
C538	9965 100 08192	100uF 16V	C705	9965 000 42228	100nF 16V X7R 0603	C781	9965 100 08198	10uF 10V 0805
C539	9965 000 42228	100nF 16V X7R 0603	C706	9965 000 42228	100nF 16V X7R 0603	C781	9965 100 09685	10F 10V
C540	9965 000 42228	100nF 16V X7R 0603	C707	9965 000 42228	100nF 16V X7R 0603	C782	9965 000 42228	100nF 16V X7R 0603
C541	9965 000 42228	100nF 16V X7R 0603	C708	9965 000 42260	10nF 50V X7R 0603	C783	9965 000 42401	220pF NPO 50V 5% 0603
C542	9965 000 42228	100nF 16V X7R 0603	C709	9965 000 42260	10nF 50V X7R 0603	C784	9965 000 42403	10µF 25V 20% 1210
C543	9965 000 42228	100nF 16V X7R 0603	C710	9965 000 42228	100nF 16V X7R 0603	C784	9965 100 08198	10uF 10V 0805
C544	9965 000 42228	100nF 16V X7R 0603	C711	9965 000 42228	100nF 16V X7R 0603	C784	9965 100 09685	10F 10V
C545	9965 000 42228	100nF 16V X7R 0603	C712	9965 000 42228	100nF 16V X7R 0603	C789	9965 000 43992	220µF
C546	9965 000 42228	100nF 16V X7R 0603	C713	9965 000 42228	100nF 16V X7R 0603	C789	9965 000 43993	220µF 10V
C547	9965 000 42228	100nF 16V X7R 0603	C714	9965 000 42228	100nF 16V X7R 0603	C790	9965 000 43992	220µF
C548	9965 000 42228	100nF 16V X7R 0603	C715	9965 000 42228	100nF 16V X7R 0603	C790	9965 000 43993	220µF 10V
C549	9965 000 42228	100nF 16V X7R 0603	C716	9965 000 42228	100nF 16V X7R 0603	C800	9965 000 43913	470µF 35V
C550	9965 000 42228	100nF 16V X7R 0603	C717	9965 000 42228	100nF 16V X7R 0603	C800	9965 000 43914	470µF 35V
C551	9965 000 42228	100nF 16V X7R 0603	C718	9965 000 42228	100nF 16V X7R 0603	C800	9965 100 08195	100uF 35V
C552	9965 000 42228	100nF 16V X7R 0603	C719	9965 000 42228	100nF 16V X7R 0603	C800	9965 100 08196	100µF 35V
C553	9965 000 42228	100nF 16V X7R 0603	C720	9965 000 42235	47µF 25V 6.3X5.3mm	C800	9965 100 08197	100µF 35V
C554	9965 000 42228	100nF 16V X7R 0603	C720	9965 100 03679	47uF 16V	C801	9965 000 43913	470µF 35V
C555	9965 100 03699	220uF 25V	C720	9965 100 03680	47uF 16V	C801	9965 000 43914	470µF 35V
C555	9965 100 05107	2200uF 25V	C720	9965 100 03697	47uF 25V	C802	9965 000 43989	470nF 20% 50V
C555	9965 100 08193	150F 25V	C720	9965 100 05108	47uF 25V	C803	9965 000 42262	100nF 50V Y5V 0603
C555	9965 100 08194	150F 25V	C720	9965 100 08199	47uF 16V	C804	9965 000 42262	100nF 50V Y5V 0603
C556	9965 000 42233	10µF 20% 10V 1206	C721	9965 000 43488	100nF 25V 0603	C805	9965 000 43986	15nF 1% 50V
C557	9965 000 43988	4.7µF 10% 10V	C725	9965 000 42228	100nF 16V X7R 0603	C806	9965 000 42262	100nF 50V Y5V 0603
C557	9965 100 03698	4.7uF +/-10% 10V	C726	9965 000 43977	1nF 5% 25V 0603	C807	9965 000 42604	470µF 25V
C558	9965 000 42228	100nF 16V X7R 0603	C727	9965 000 42260	10nF 50V X7R 0603	C807	9965 000 42605	470nF 25V EB 10X13mm
C559	9965 000 42233	10µF 20% 10V 1206	C728	9965 000 43980	100nF 20% 25V 0603	C807	9965 000 43917	1000µF 25V
C560	9965 000 43988	4.7µF 10% 10V	C729	9965 000 42693	5pF 50V NPO 0603	C808	9965 000 42262	100nF 50V Y5V 0603
C560	9965 100 03698	4.7uF +/-10% 10V	C730	9965 000 42260	10nF 50V X7R 0603	C809	9965 000 43982	470pF
C561	9965 000 42228	100nF 16V X7R 0603	C731	9965 000 42260	10nF 50V X7R 0603	C810	9965 000 43989	470nF 20% 50V
C562	9965 000 42228	100nF 16V X7R 0603	C732	9965 000 42693	5pF 50V NPO 0603	C811	9965 000 43989	470nF 20% 50V
C563	9965 000 42403	10µF 25V 20% 1210	C733	9965 000 42260	10nF 50V X7R 0603	C812	9965 000 42604	470µF 25V
C563	9965 100 08198	10uF 10V 0805	C734	9965 000 42260	10nF 50V X7R 0603	C812	9965 000 42605	470µF 25V EB 10X13mm
C563	9965 100 09685	10F 10V	C735	9965 000 42231	330pF 50V NPO 0603	C812	9965 000 43917	1000µF 25V
C564	9965 000 42228	100nF 16V X7R 0603	C736	9965 000 42231	330pF 50V NPO 0603	C813	9965 000 42262	100nF 50V Y5V 0603
C565	9965 000 42228	100nF 16V X7R 0603	C737	9965 000 42693	5pF 50V NPO 0603	C814	9965 000 42262	100nF 50V Y5V 0603
C566	9965 000 42228	100nF 16V X7R 0603	C738	9965 000 42260	10nF 50V X7R 0603	C815	9965 000 43986	15nF 1% 50V
C567	9965 000 42228	100nF 16V X7R 0603	C739	9965 000 42231	330pF 50V NPO 0603	C816	9965 000 43985	1µF 20% 16V
C568	9965 000 42228	100nF 16V X7R 0603	C740	9965 000 42231	330pF 50V NPO 0603	C817	9965 000 43985	1µF 20% 16V
C569	9965 000 42228	100nF 16V X7R 0603	C741	9965 000 42229	22pF 50V NPO 0603	C818	9965 000 43987	470nF 20% 16V
C570	9965 000 42228	100nF 16V X7R 0603	C742	9965 000 42693	5pF 50V NPO 0603	C819	9965 000 42262	100nF 50V Y5V 0603
C571	9965 000 42228	100nF 16V X7R 0603	C760	9965 000 42228	100nF 16V X7R 0603	C820	9965 000 42262	100nF 50V Y5V 0603
C572	9965 000 42228	100nF 16V X7R 0603	C761	9965 000 42403	10µF 25V 20% 1210	C821	9965 000 42235	47µF 25V 6.3X5.3mm
C573	9965 000 42228	100nF 16V X7R 0603	C761	9965 100 08198	10uF 10V 0805	C821	9965 100 03697	47uF 25V
C574	9965 000 42228	100nF 16V X7R 0603	C761	9965 100 09685	10F 10V	C821	9965 100 05108	47uF 25V
C575	9965 000 42228	100nF 16V X7R 0603	C762	9965 000 42403	10µF 25V 20% 1210	C822	9965 000 42262	100nF 50V Y5V 0603
C576	9965 000 42228	100nF 16V X7R 0603	C762	9965 100 08198	10uF 10V 0805	C823	9965 000 43985	1µF 20% 16V
C577	9965 000 42228	100nF 16V X7R 0603	C762	9965 100 09685	10F 10V	C824	9965 000 43985	1µF 20% 16V
C578	9965 000 42228	100nF 16V X7R 0603	C763	9965 000 42228	100nF 16V X7R 0603	C825	9965 000 42231	330pF 50V NPO 0603
C579	9965 000 42228	100nF 16V X7R 0603	C764	9965 000 42228	100nF 16V X7R 0603	C826	9965 000 42231	330pF 50V NPO 0603
C580	9965 000 42228	100nF 16V X7R 0603	C765	9965 000 42228	100nF 16V X7R 0603	C827	9965 000 42262	100nF 50V Y5V 0603
C581	9965 000 42228	100nF 16V X7R 0603	C766	9965 000 42403	10µF 25V 20% 1210	C828	9965 000 43982	470pF
C601	9965 000 43977	1nF 5% 25V 0603	C766	9965 100 08198	10uF 10V 0805	C829	9965 000 42262	100nF 50V Y5V 0603
C602	9965 000 42678	15pF -5% 50V 0603	C766	9965 100 09685	10F 10V	C830	9965 100 03699	220uF 25V
C603	9965 000 42678	15pF -5% 50V 0603	C767	9965 000 42403	10µF 25V 20% 1210	C830	9965 100 05107	2200uF 25V
C604	9965 000 42678	15pF -5% 50V 0603	C767	9965 100 08198	10uF 10V 0805	C850	9965 000 42228	100nF 16V X7R 0603
C605	9965 000 42678	15pF -5% 50V 0603	C767	9965 100 09685	10F 10V	C851	9965 000 42698	10µF 16V 20% 1206
C606	9965 000 42260	10nF 50V X7R 0603	C768	9965 000 42403	10µF 25V 20% 1210	C900	9965 000 42260	10nF 50V X7R 0603
C607	9965 000 42678	15pF -5% 50V 0603	C768	9965 100 08198	10uF 10V 0805	C901	9965 000 43980	100nF 20% 25V 0603
C608	9965 000 42678	15pF -5% 50V 0603	C768	9965 100 09685	10F 10V	C902	9965 100 05995	47F 25V
C609	9965 000 42260	10nF 50V X7R 0603	C769	9965 000 42403	10µF 25V 20% 1210	C903	9965 000 42678	15pF -5% 50V 0603
C610	9965 000 42260	10nF 50V X7R 0603	C769	9965 100 08198	10uF 10V 0805	C904	9965 000 43980	100nF 20% 25V 0603
C611	9965 000 42260	10nF 50V X7R 0603	C769	9965 100 09685	10F 10V	C905	9965 000 42678	15pF -5% 50V 0603
C612	9965 000 42260	10nF 50V X7R 0603	C770	9965 000 42403	10µF 25V 20% 1210	C906	9965 000 43994	10µF 16V
C613	9965 000 42260	10nF 50V X7R 0603	C770	9965 100 08198	10uF 10V 0805	C907	9965 000 43977	1nF 5% 25V 0603
C641	9965 000 42231	330pF 50V NPO 0603	C770	9965 100 09685	10F 10V	C908	9965 000 42678	15pF -5% 50V 0603
C642	9965 000 42231	330pF 50V NPO 0603	C771	9965 000 42403	10µF 25V 20% 1210	C909	9965 000 42260	10nF 50V X7R 0603
C644	9965 000 42231	330pF 50V NPO 0603	C771	9965 100 08198	10uF 10V 0805	C910	9965 000 42231	330pF 50V NPO 0603

C921	9965 000 42400	1μF 10V Y5V 20% 0603
C922	9965 000 42400	1μF 10V Y5V 20% 0603
C923	9965 000 42400	1μF 10V Y5V 20% 0603
C924	9965 000 42400	1μF 10V Y5V 20% 0603
C925	9965 000 42403	10μF 25V 20% 1210
C925	9965 000 43994	10μF 16V
C926	9965 000 43980	100nF 20% 25V 0603
C927	9965 000 42260	10nF 50V X7R 0603
C928	9965 000 43980	100nF 20% 25V 0603
C929	9965 000 43980	100nF 20% 25V 0603
C930	9965 000 43980	100nF 20% 25V 0603
C931	9965 000 43980	100nF 20% 25V 0603
C932	9965 000 42260	10nF 50V X7R 0603
C933	9965 000 42260	10nF 50V X7R 0603
C934	9965 000 42264	1μF 16V 0805
C935	9965 000 42264	1μF 16V 0805
C936	9965 000 42264	1μF 16V 0805
C937	9965 000 42264	1μF 16V 0805
C938	9965 000 42264	1μF 16V 0805
C939	9965 000 42260	10nF 50V X7R 0603
C940	9965 000 42264	1μF 16V 0805
CN100	9965 100 03429	Connector
CN351	9965 000 44317	Connector 2.0mm 3p
CN601	9965 000 43922	RCA Jack g/b/r g/b/r
CN601	9965 000 43925	RCA Jack g/b/r g/b/r
CN601	9965 100 03446	RCA Jack g/b/r+g/b/r
CN640	9965 000 42612	RCA Jack
CN640	9965 000 43921	RCA Jack w/r w/r 2pj
CN660	9965 000 43920	RCA Jack 1p Bk
CN660	9965 000 44598	RCA JACK 1p BL
CN661	9965 000 43923	RCA Jack Wh/Ye/Rd
CN661	9965 000 43924	RCA Jack Wh/Ye/Rd
CN662	9965 000 44320	Connector 2*7p
CN700	9965 100 05953	HDMI Header 19p
CN701	9965 100 05953	HDMI Header 19p
CN726	9965 000 43927	DB15 Right Angle f
CN726	9965 000 43928	D-SUB Conn 15p f
CN727	9965 000 43926	Phone Jack 3.5MM 3p
CN850	9965 000 44323	Conn. 2*20p m
CN900	9965 000 45310	Connector FF 0.5mm
CN900	9965 100 06905	Connector 16p
CON700	9965 000 44002	HDMI Header 19p
CON701	9965 000 44002	HDMI Header 19p

-W-

R100	9965 000 42212	0Ω 5% 1/10W
R101	9965 000 42395	10kΩ 1% 1/10W
R102	9965 000 42661	2.7kΩ 1% 1/10W
R103	9965 000 42220	22kΩ 5% 1/10W
R104	9965 000 42213	100Ω 5% 1/10W
R105	9965 000 42220	22kΩ 5% 1/10W
R106	9965 000 42214	10kΩ 5% 1/10W
R107	9965 000 42226	68Ω 5% 1/10W
R108	9965 000 42218	220Ω 5% 1/10W
R109	9965 000 42226	68Ω 5% 1/10W
R110	9965 000 43966	4.7Ω 5% 1/10W
R111	9965 000 42656	10kΩ 5% 1/10W
R112	9965 000 43957	2.2Ω 5% 1/10W
R113	9965 000 43962	39kΩ 5% 1/10W
R114	9965 000 43487	3.3kΩ 5% 1/10W
R115	9965 000 43487	3.3kΩ 5% 1/10W
R116	9965 000 40053	1KΩ 1/10W 5%
R117	9965 000 42220	22kΩ 5% 1/10W
R118	9965 000 42656	10Ω 5% 1/10W
R119	9965 000 42669	6.8kΩ 5% 1/10W
R120	9965 000 43955	1kΩ 1% 1/10W
R121	9965 000 43961	3.9kΩ 5% 1/10W
R122	9965 000 43955	1kΩ 1% 1/10W
R123	9965 000 43959	240Ω 1% 1/10W
R124	9965 000 43975	560Ω 1% 1/8W
R125	9965 000 42221	27kΩ 5% 1/10W
R126	9965 000 43965	470Ω 1% 1/10W
R127	9965 000 42214	10kΩ 5% 1/10W
R128	9965 000 42220	22kΩ 5% 1/10W
R129	9965 000 42218	220Ω 5% 1/10W
R130	9965 000 42220	22kΩ 5% 1/10W
R131	9965 000 42214	10kΩ 5% 1/10W
R132	9965 000 42218	220Ω 5% 1/10W
R133	9965 000 42669	6.8kΩ 5% 1/10W
R134	9965 000 43969	750Ω 1% 1/10W
R135	9965 000 42669	6.8kΩ 5% 1/10W
R136	9965 000 43487	3.3kΩ 5% 1/10W
R137	9965 000 42220	22kΩ 5% 1/10W
R138	9965 000 43966	4.7Ω 5% 1/10W
R139	9965 000 42656	10Ω 5% 1/10W
R140	9965 000 43957	2.2Ω 5% 1/10W
R141	9965 000 42656	10Ω 5% 1/10W
R142	9965 000 43955	1kΩ 1% 1/10W
R143	9965 000 43958	1.5kΩ 5% 1/10W
R144	9965 000 42219	2.2kΩ 5% 1/10W
R145	9965 000 43968	560Ω 1% 1/10W
R146	9965 000 44051	220Ω 1% 1/10W

R147	9965 000 42669	6.8kΩ 5% 1/10W
R148	9965 000 44051	220Ω 1% 1/10W
R149	9965 000 43975	560Ω 1% 1/8W
R150	9965 000 43912	1.2Ω 5% 2W
R151	9965 000 42213	100Ω 5% 1/10W
R152	9965 000 42220	22kΩ 5% 1/10W
R153	9965 000 42284	0Ω 1/10W
R154	9965 000 42213	100Ω 5% 1/10W
R155	9965 000 42284	0Ω 1/10W
R156	9965 000 42277	47kΩ 5% 1/10W
R157	9965 000 42220	22kΩ 5% 1/10W
R158	9965 000 42220	22kΩ 5% 1/10W
R159	9965 000 42214	10kΩ 5% 1/10W
R160	9965 000 43954	120Ω 1% 1/10W
R161	9965 000 43960	24Ω 1% 1/10W
R162	9965 000 43954	120Ω 1% 1/10W
R163	9965 000 43974	1Ω 5% 1/8W
R164	9965 000 42214	10kΩ 5% 1/10W
R165	9965 000 42225	4.7kΩ 5% 1/10W
R166	9965 100 02778	15kΩ 1% 0.1W
R167	9965 000 42214	10kΩ 5% 1/10W
R169	9965 000 42225	4.7kΩ 5% 1/10W
R170	9965 000 42213	100Ω 5% 1/10W
R171	9965 000 42214	10kΩ 5% 1/10W
R172	9965 000 40053	1KΩ 1/10W 5%
R173	9965 000 42225	4.7kΩ 5% 1/10W
R174	9965 000 39751	0Ω 1/8W
R175	9965 000 39751	0Ω 1/8W
R176	9965 000 39751	0Ω 1/8W
R178	9965 000 42213	100Ω 5% 1/10W
R179	9965 000 42395	10kΩ 1% 1/10W
R180	9965 000 43975	560Ω 1% 1/8W
R181	9965 000 42661	2.7kΩ 1% 1/10W
R182	9965 000 42212	0Ω 5% 1/10W
R183	9965 000 43975	560Ω 1% 1/8W
R184	9965 000 44051	220Ω 1% 1/10W
R185	9965 000 39751	0Ω 1/8W
R186	9965 000 39751	0Ω 1/8W
R187	9965 000 40053	1KΩ 1/10W 5%
R188	9965 000 42212	0Ω 5% 1/10W
R189	9965 000 43975	560Ω 1% 1/8W
R190	9965 000 43975	560Ω 1% 1/8W
R191	9965 100 02779	4.7kΩ 1% 0.1W
R201	9965 000 42213	100Ω 5% 1/10W
R202	9965 000 42225	4.7kΩ 5% 1/10W
R205	9965 000 42212	0Ω 5% 1/10W
R206	9965 000 42212	0Ω 5% 1/10W
R207	9965 000 43336	75Ω 5% 1/10W
R208	9965 000 42214	10kΩ 5% 1/10W
R209	9965 000 42214	10kΩ 5% 1/10W
R210	9965 000 42225	4.7kΩ 5% 1/10W
R211	9965 000 42225	4.7kΩ 5% 1/10W
R212	9965 000 42212	0Ω 5% 1/10W
R213	9965 000 42225	4.7kΩ 5% 1/10W
R214	9965 000 43962	39kΩ 5% 1/10W
R215	9965 000 43962	39kΩ 5% 1/10W
R217	9965 000 42219	2.2kΩ 5% 1/10W
R218	9965 000 42284	0Ω 1/10W
R219	9965 000 44038	220kΩ 5% 1/10W
R220	9965 000 42215	100kΩ 5% 1/10W
R250	9965 000 44050	1.1kΩ 5% 1/10W
R251	9965 000 42225	4.7kΩ 5% 1/10W
R252	9965 000 42225	4.7kΩ 5% 1/10W
R253	9965 000 42225	4.7kΩ 5% 1/10W
R254	9965 000 42222	33Ω 5% 1/10W
R255	9965 000 42222	33Ω 5% 1/10W
R256	9965 000 42222	33Ω 5% 1/10W
R257	9965 000 42222	33Ω 5% 1/10W
R258	9965 000 42222	33Ω 5% 1/10W
R259	9965 000 42222	33Ω 5% 1/10W
R260	9965 000 42222	33Ω 5% 1/10W
R261	9965 000 42222	33Ω 5% 1/10W
R262	9965 000 42216	1MΩ 5% 1/10W
R263	9965 000 42222	33Ω 5% 1/10W
R264	9965 000 42222	33Ω 5% 1/10W
R265	9965 000 42222	33Ω 5% 1/10W
R266	9965 000 42222	33Ω 5% 1/10W
R301	9965 000 42212	0Ω 5% 1/10W
R302	9965 000 42212	0Ω 5% 1/10W
R303	9965 000 43336	75Ω 5% 1/10W
R304	9965 000 43336	75Ω 5% 1/10W
R305	9965 000 43336	75Ω 5% 1/10W
R346	9965 000 43965	470Ω 1% 1/10W
R347	9965 000 44324	22kΩ 1% 0.1W
R348	9965 000 42225	4.7kΩ 5% 1/10W
R349	9965 000 42217	22Ω 5% 1/10W
R351	9965 000 42214	10kΩ 5% 1/10W
R352	9965 000 42214	10kΩ 5% 1/10W
R353	9965 000 42214	10kΩ 5% 1/10W
R354	9965 000 42214	10kΩ 5% 1/10W
R355	9965 000 42214	10kΩ 5% 1/10W
R356	9965 000 42214	10kΩ 5% 1/10W
R357	9965 000 42214	10kΩ 5% 1/10W
R358	9965 000 42214	10kΩ 5% 1/10W

R359	9965 000 42212	0Ω 5% 1/10W
R362	9965 000 42217	22Ω 5% 1/10W
R363	9965 000 42222	33Ω 5% 1/10W
R364	9965 000 42218	220Ω 5% 1/10W
R365	9965 000 42222	33Ω 5% 1/10W
R366	9965 000 42277	47kΩ 5% 1/10W
R367	9965 000 42214	10kΩ 5% 1/10W
R368	9965 000 42214	10kΩ 5% 1/10W
R369	9965 000 43972	8.2kΩ 5% 1/10W
R370	9965 000 42213	100Ω 5% 1/10W
R371	9965 000 42214	10kΩ 5% 1/10W
R372	9965 000 42213	100Ω 5% 1/10W
R373	9965 000 42666	51Ω 5% 1/10W
R374	9965 000 42225	4.7kΩ 5% 1/10W
R375	9965 000 42225	4.7kΩ 5% 1/10W
R377	9965 000 42214	10kΩ 5% 1/10W
R378	9965 000 42218	220Ω 5% 1/10W
R379	9965 000 42225	4.7kΩ 5% 1/10W
R380	9965 000 42213	100Ω 5% 1/10W
R381	9965 000 42213	100Ω 5% 1/10W
R382	9965 000 42213	100Ω 5% 1/10W
R383	9965 000 42225	4.7kΩ 5% 1/10W
R384	9965 000 42225	4.7kΩ 5% 1/10W
R385	9965 000 42213	100Ω 5% 1/10W
R386	9965 000 42213	100Ω 5% 1/10W
R387	9965 000 42213	100Ω 5% 1/10W
R388	9965 000 42219	2.2kΩ 5% 1/10W
R390	9965 000 42225	4.7kΩ 5% 1/10W
R391	9965 000 42225	4.7kΩ 5% 1/10W
R392	9965 000 42225	4.7kΩ 5% 1/10W
R394	9965 000 42225	4.7kΩ 5% 1/10W
R395	9965 000 43961	3.9kΩ 5% 1/10W
R396	9965 000 42225	4.7kΩ 5% 1/10W
R397	9965 000 42225	4.7kΩ 5% 1/10W
R398	9965 000 42225	4.7kΩ 5% 1/10W
R399	9965 000 42213	100Ω 5% 1/10W
R400	9965 000 42213	100Ω 5% 1/10W
R401	9965 000 43971	820Ω 1% 1/10W
R501	9965 000 42213	100Ω 5% 1/10W
R502	9965 000 42217	22Ω 5% 1/10W
R504	9965 000 42217	22Ω 5% 1/10W
R505	9965 000 42217	22Ω 5% 1/10W
R506	9965 000 42217	22Ω 5% 1/10W
R507	9965 000 42217	22Ω 5% 1/10W
R508	9965 000 42213	100Ω 5% 1/10W
R509	9965 000 42225	4.7kΩ 5% 1/10W
R510	9965 000 42664	47Ω 5% 1/10W
R511	9965 000 42664	47Ω 5% 1/10W
R512	9965 000 42664	47Ω 5% 1/10W
R513	9965 000 42664	47Ω 5% 1/10W
R514	9965 000 42664	47Ω 5% 1/10W
R515	9965 000 42664	47Ω 5% 1/10W
R516	9965 000 42664	47Ω 5% 1/10W
R517	9965 000 42664	47Ω 5% 1/10W
R518	9965 000 43336	75Ω 5% 1/10W
R519	9965 000 43336	75Ω 5% 1/10W
R520	9965 000 43336	75Ω 5% 1/10W
R521	9965 000 43336	75Ω 5% 1/10W
R522	9965 000 43336	75Ω 5% 1/10W
R523	9965 000 43336	75Ω 5% 1/10W
R524	9965 000 43336	7

R671	9965 000 40053	1KΩ 1/10W 5%	R780	9965 000 43963	3.9kΩ 1% 1/10W	R938	9965 100 05994	47kΩ 1% 1/10W
R672	9965 000 42221	27kΩ 5% 1/10W	R780	9965 000 44599	5kΩ 1% 0.1W	R939	9965 100 05994	47kΩ 1% 1/10W
R673	9965 000 42225	4.7kΩ 5% 1/10W	R781	9965 000 42222	33Ω 5% 1/10W	R940	9965 000 42226	68Ω 5% 1/10W
R674	9965 000 42213	100Ω 5% 1/10W	R782	9965 000 43963	3.9kΩ 1% 1/10W	R941	9965 000 42226	68Ω 5% 1/10W
R675	9965 000 42213	100Ω 5% 1/10W	R782	9965 000 44599	5kΩ 1% 0.1W	R942	9965 000 42213	100Ω 5% 1/10W
R676	9965 000 42213	100Ω 5% 1/10W	R785	9965 000 42225	4.7kΩ 5% 1/10W	R943	9965 000 42226	68Ω 5% 1/10W
R677	9965 000 42225	4.7kΩ 5% 1/10W	R786	9965 000 42277	47kΩ 5% 1/10W	R944	9965 000 42213	100Ω 5% 1/10W
R678	9965 000 42212	0Ω 5% 1/10W	R787	9965 000 42277	47kΩ 5% 1/10W	R945	9965 000 42226	68Ω 5% 1/10W
R686	9965 000 40053	1KΩ 1/10W 5%	R788	9965 000 42212	0Ω 5% 1/10W	R946	9965 000 42213	100Ω 5% 1/10W
R687	9965 000 42662	330Ω 5% 1/10W	R789	9965 000 42212	0Ω 5% 1/10W	R947	9965 000 42213	100Ω 5% 1/10W
R688	9965 000 42662	330Ω 5% 1/10W	R790	9965 000 43970	7.5kΩ 5% 1/10W	R948	9965 000 40053	1KΩ 1/10W 5%
R689	9965 000 42213	100Ω 5% 1/10W	R791	9965 000 43970	7.5kΩ 5% 1/10W	R949	9965 000 42213	100Ω 5% 1/10W
R690	9965 000 42213	100Ω 5% 1/10W	R792	9965 000 40053	1KΩ 1/10W 5%	R950	9965 000 42213	100Ω 5% 1/10W
R691	9965 000 42225	4.7kΩ 5% 1/10W	R793	9965 000 40053	1KΩ 1/10W 5%	R951	9965 000 42213	100Ω 5% 1/10W
R692	9965 000 42212	0Ω 5% 1/10W	R794	9965 000 42212	0Ω 5% 1/10W	R952	9965 000 42284	0Ω 1/10W
R693	9965 000 42212	0Ω 5% 1/10W	R794	9965 000 44051	220Ω 5% 1/10W	R953	9965 000 42284	0Ω 1/10W
R694	9965 000 42214	10kΩ 5% 1/10W	R795	9965 000 42212	0Ω 5% 1/10W	R954	9965 000 42284	0Ω 1/10W
R695	9965 000 42214	10kΩ 5% 1/10W	R795	9965 000 44051	220Ω 5% 1/10W	R955	9965 000 42212	0Ω 5% 1/10W
R696	9965 000 42214	10kΩ 5% 1/10W	R801	9965 000 42225	4.7kΩ 5% 1/10W	RP501	9965 000 43951	22Ω 5%
R697	9965 000 42214	10kΩ 5% 1/10W	R802	9965 000 42225	4.7kΩ 5% 1/10W	RP502	9965 000 43951	22Ω 5%
R698	9965 000 42225	4.7kΩ 5% 1/10W	R803	9965 000 42225	4.7kΩ 5% 1/10W	RP503	9965 000 43952	47Ω 5% 1/16W
R699	9965 000 42225	4.7kΩ 5% 1/10W	R804	9965 000 43962	39kΩ 5% 1/10W	RP504	9965 000 43952	47Ω 5% 1/16W
R700	9965 000 40053	1KΩ 1/10W 5%	R805	9965 000 42216	1MΩ 5% 1/10W	RP505	9965 000 43951	22Ω 5%
R701	9965 000 42213	100Ω 5% 1/10W	R806	9965 000 42220	22kΩ 5% 1/10W	RP506	9965 000 43953	75Ω 5% 1/16W
R702	9965 000 42213	100Ω 5% 1/10W	R807	9965 000 42225	4.7kΩ 5% 1/10W	RP507	9965 000 43952	47Ω 5% 1/16W
R703	9965 000 42213	100Ω 5% 1/10W	R808	9965 000 42216	1MΩ 5% 1/10W	RP508	9965 000 43951	22Ω 5%
R704	9965 000 42215	100kΩ 5% 1/10W	R809	9965 000 43973	10Ω 1/10W	RP509	9965 000 43952	47Ω 5% 1/16W
R705	9965 000 40053	1KΩ 1/10W 5%	R810	9965 000 42220	22kΩ 5% 1/10W	RP510	9965 000 43951	22Ω 5%
R706	9965 000 42212	0Ω 5% 1/10W	R811	9965 000 43976	10Ω 5% 1/4W	RP511	9965 000 43952	47Ω 5% 1/16W
R707	9965 000 42213	100Ω 5% 1/10W	R812	9965 000 43976	10Ω 5% 1/4W	RP512	9965 000 43952	47Ω 5% 1/16W
R708	9965 000 42213	100Ω 5% 1/10W	R813	9965 000 42671	22Ω 5% 1/4W	RP513	9965 000 43953	75Ω 5% 1/16W
R710	9965 000 42214	10kΩ 5% 1/10W	R814	9965 000 42671	22Ω 5% 1/4W	RP514	9965 000 43952	47Ω 5% 1/16W
R711	9965 000 42214	10kΩ 5% 1/10W	R815	9965 000 42220	22kΩ 5% 1/10W	RP515	9965 000 43952	47Ω 5% 1/16W
R712	9965 000 42213	100Ω 5% 1/10W	R816	9965 000 42214	10kΩ 5% 1/10W	RP516	9965 000 43953	75Ω 5% 1/16W
R713	9965 000 40053	1KΩ 1/10W 5%	R817	9965 000 42213	100Ω 5% 1/10W	RP517	9965 000 43953	75Ω 5% 1/16W
R714	9965 000 43964	4.64kΩ 1% 1/10W	R818	9965 000 42214	10kΩ 5% 1/10W	RP518	9965 000 43953	75Ω 5% 1/16W
R715	9965 000 42225	4.7kΩ 5% 1/10W	R819	9965 000 42214	10kΩ 5% 1/10W	RP519	9965 000 43953	75Ω 5% 1/16W
R716	9965 000 42222	33Ω 5% 1/10W	R820	9965 000 42220	22kΩ 5% 1/10W	RP520	9965 000 43953	75Ω 5% 1/16W
R717	9965 000 42222	33Ω 5% 1/10W	R821	9965 000 42284	0Ω 1/10W	RP521	9965 000 43953	75Ω 5% 1/16W
R718	9965 000 42215	100kΩ 5% 1/10W	R822	9965 000 42284	0Ω 1/10W	RP522	9965 000 43953	75Ω 5% 1/16W
R719	9965 000 42214	10kΩ 5% 1/10W	R824	9965 000 40053	1KΩ 1/10W 5%	RP523	9965 000 43953	75Ω 5% 1/16W
R720	9965 000 42214	10kΩ 5% 1/10W	R825	9965 000 40053	1KΩ 1/10W 5%	RP524	9965 000 43953	75Ω 5% 1/16W
R721	9965 000 42217	22Ω 5% 1/10W	R826	9965 000 42214	10kΩ 5% 1/10W	RP525	9965 000 43953	75Ω 5% 1/16W
R722	9965 000 42217	22Ω 5% 1/10W	R827	9965 000 42214	10kΩ 5% 1/10W	RP526	9965 000 43953	75Ω 5% 1/16W
R723	9965 000 42212	0Ω 5% 1/10W	R850	9965 000 42213	100Ω 5% 1/10W			
R724	9965 000 42212	0Ω 5% 1/10W	R850	9965 000 43490	5.6kΩ 5% 0.1W			
R725	9965 000 42212	0Ω 5% 1/10W	R852	9965 000 40053	1KΩ 1/10W 5%			
R726	9965 000 42226	68Ω 5% 1/10W	R852	9965 000 42225	4.7kΩ 5% 1/10W	L100	9965 000 44001	22μH 20%
R727	9965 000 42213	100Ω 5% 1/10W	R853	9965 000 42225	4.7kΩ 5% 1/10W	L100	9965 100 02833	Inductor 22uH 20%
R728	9965 000 42212	0Ω 5% 1/10W	R855	9965 000 43956	2kΩ 5% 1/10W	L100	9965 100 03275	22μH 20%
R729	9965 000 42226	68Ω 5% 1/10W	R856	9965 000 42214	10kΩ 5% 1/10W	L101	9965 000 43998	10μH SLF12575T-1
R730	9965 000 43336	75Ω 5% 1/10W	R857	9965 000 42225	4.7kΩ 5% 1/10W	L101	9965 100 02834	SLF12575T
R731	9965 000 42213	100Ω 5% 1/10W	R858	9965 000 42212	0Ω 5% 1/10W	L102	9965 000 43998	10μH SLF12575T-1
R732	9965 000 42226	68Ω 5% 1/10W	R860	9965 000 42212	0Ω 5% 1/10W	L150	9965 000 44001	22μH 20%
R733	9965 000 43336	75Ω 5% 1/10W	R860	9965 000 42218	220Ω 5% 1/10W	L151	9965 000 44001	22μH 20%
R734	9965 000 42213	100Ω 5% 1/10W	R866	9965 000 42225	4.7kΩ 5% 1/10W	L151	9965 100 02833	Inductor 22uH 20%
R735	9965 000 42212	0Ω 5% 1/10W	R900	9965 000 42213	100Ω 5% 1/10W	L151	9965 100 03275	22μH 20%
R736	9965 000 42226	68Ω 5% 1/10W	R901	9965 000 42220	22kΩ 5% 1/10W	L201	9965 000 42718	2.2μH 10% FCI160
R737	9965 000 40053	1KΩ 1/10W 5%	R902	9965 000 42214	10kΩ 5% 1/10W	L201	9965 100 02835	2.2uH 10%
R738	9965 000 42221	27kΩ 5% 1/10W	R903	9965 000 43336	75Ω 5% 1/10W	L201	9965 100 03278	2.2μH 10%
R739	9965 000 43336	75Ω 5% 1/10W	R904	9965 000 42214	10kΩ 5% 1/10W	L202	9965 000 42718	2.2μH 10% FCI160
R740	9965 000 42213	100Ω 5% 1/10W	R905	9965 000 42214	10kΩ 5% 1/10W	L202	9965 100 03278	2.2μH 10%
R741	9965 000 40053	1KΩ 1/10W 5%	R906	9965 000 43336	75Ω 5% 1/10W	L601	9965 000 43818	0.10μH 10%
R742	9965 000 42221	27kΩ 5% 1/10W	R907	9965 000 43955	1kΩ 1% 1/10W	L601	9965 100 02836	0.1 uH 10%
R743	9965 000 43967	510Ω 5% 1/10W	R908	9965 000 42212	0Ω 5% 1/10W	L601	9965 100 02837	0.1 uH 10%
R744	9965 000 43956	2kΩ 5% 1/10W	R909	9965 000 43955	1kΩ 1% 1/10W	L601	9965 100 02875	Ind. 0.1 uH 10%
R745	9965 000 43967	510Ω 5% 1/10W	R910	9965 000 43336	75Ω 5% 1/10W	L601	9965 100 03279	0.10μH 10%
R746	9965 000 42214	10kΩ 5% 1/10W	R911	9965 000 43955	1kΩ 1% 1/10W	L601	9965 100 03280	0.10H 10% FCI1608F
R748	9965 000 43956	2kΩ 5% 1/10W	R912	9965 000 42221	27kΩ 5% 1/10W	L602	9965 000 43818	0.10μH 10%
R749	9965 000 42213	100Ω 5% 1/10W	R913	9965 000 40053	1KΩ 1/10W 5%	L602	9965 100 02875	Ind. 0.1 uH 10%
R750	9965 000 42225	4.7kΩ 5% 1/10W	R914	9965 000 40053	1KΩ 1/10W 5%	L602	9965 100 03279	0.10μH 10%
R751	9965 000 42214	10kΩ 5% 1/10W	R915	9965 000 42221	27kΩ 5% 1/10W	L602	9965 100 03280	0.10H 10% FCI1608F
R753	9965 000 42222	33Ω 5% 1/10W	R916	9965 000 42212	0Ω 5% 1/10W	L603	9965 000 43818	0.10μH 10%
R754	9965 000 42213	100Ω 5% 1/10W	R917	9965 100 02779	4.7kΩ 1% 0.1W	L603	9965 100 02875	Ind. 0.1 uH 10%
R760	9965 000 42214	10kΩ 5% 1/10W	R918	9965 100 02779	4.7kΩ 1% 0.1W	L603	9965 100 03279	0.10μH 10%
R761	9965 000 42213	100Ω 5% 1/10W	R919	9965 000 43955	1kΩ 1% 1/10W	L603	9965 100 03280	0.10H 10% FCI1608F
R762	9965 000 42214	10kΩ 5% 1/10W	R920	9965 000 43955	1kΩ 1% 1/10W	L603	9965 100 03280	0.10H 10% FCI1608F
R763	9965 000 42214	10kΩ 5% 1/10W	R921	9965 000 43955	1kΩ 1% 1/10W	L604	9965 000 43818	0.10μH 10%
R764	9965 000 42214	10kΩ 5% 1/10W	R922	9965 000 43955	1kΩ 1% 1/10W	L604	9965 100 02875	Ind. 0.1 uH 10%
R765	9965 000 42225	4.7kΩ 5% 1/10W	R923	9965 100 05994	47kΩ 1% 1/10W	L604	9965 100 03279	0.10μH 10%
R766	9965 000 42225	4.7kΩ 5% 1/10W	R924	9965 100 05994	47kΩ 1% 1/10W	L604	9965 100 03280	0.10H 10% FCI1608F
R767	9965 000 42214	10kΩ 5% 1/10W	R925	9965 100 05994	47kΩ 1% 1/10W	L605	9965 000 43818	0.10μH 10%
R768	9965 000 42214	10kΩ 5% 1/10W	R926	9965 100 05994	47kΩ 1% 1/10W	L605	9965 100 02875	Ind. 0.1 uH 10%
R769	9965 000 42214	10kΩ 5% 1/10W	R927	9965 000 42212	0Ω 5% 1/10W	L605	9965 100 03279	0.10μH 10%
R770	9965 000 42214	10kΩ 5% 1/10W	R928	9965 000 42212	0Ω 5% 1/10W	L605	9965 100 03280	0.10H 10% FCI1608F
R771	9965 000 42214	10kΩ 5% 1/10W	R929	9965 000 42212	0Ω 5% 1/10W	L606	9965 000 43818	0.10μH 10%
R772	9965 000 42214	10kΩ 5% 1/10W	R930	9965 000 42212	0Ω 5% 1/10W	L606	9965 100 02875	Ind. 0.1 uH 10%
R773	9965 000 42222	33Ω 5% 1/10W	R931	9965 000 42212	0Ω 5% 1/10W	L606	9965 100 03279	0.10μH 10%
R774	9965 000 42222	33Ω 5% 1/10W	R932	9965 000 44785	3kΩ 1% 0.1W	L606	9965 100 03280	0.10H 10% FCI1608F
R775	9965 000 42222	33Ω 5% 1/10W	R933	9965 000 40053	1KΩ 1/10W 5%	L660	9965 000 43818	0.1

L661	9965 100 02875	Ind. 0.1 uH 10%
L661	9965 100 03279	0.10µH 10%
L661	9965 100 03280	0.10H 10% FCI1608F
L662	9965 000 43818	0.10µH 10%
L662	9965 100 02875	Ind. 0.1 uH 10%
L662	9965 100 03279	0.10µH 10%
L662	9965 100 03280	0.10H 10% FCI1608F
L725	9965 000 43818	0.10µH 10%
L725	9965 100 02875	Ind. 0.1 uH 10%
L725	9965 100 03279	0.10µH 10%
L725	9965 100 03280	0.10H 10% FCI1608F
L726	9965 000 43818	0.10µH 10%
L726	9965 100 02875	Ind. 0.1 uH 10%
L726	9965 100 03279	0.10µH 10%
L726	9965 100 03280	0.10H 10% FCI1608F
L801	9965 000 42392	33µH 10% TSL0808
L802	9965 000 42392	33µH 10% TSL0808
L855	9965 000 43999	67Ω/400mADLW21SN67
L855	9965 000 44000	90Ω/400mA ACM2012
L855	9965 100 02838	Choke 670m/400mA
L855	9965 100 02839	Choke 900m/400mA
L855	9965 100 03283	ACM2012 90Ω/400mA
L856	9965 000 43999	67Ω/400mADLW21SN67
L856	9965 000 44000	90Ω/400mA ACM2012
L856	9965 100 03283	ACM2012 90Ω/400mA
L857	9965 000 43999	67Ω/400mADLW21SN67
L857	9965 000 44000	90Ω/400mA ACM2012
L857	9965 100 03283	ACM2012 90Ω/400mA
L858	9965 000 43999	67Ω/400mADLW21SN67
L858	9965 000 44000	90Ω/400mA ACM2012
L858	9965 100 03283	ACM2012 90Ω/400mA
L859	9965 000 43999	67Ω/400mADLW21SN67
L859	9965 000 44000	90Ω/400mA ACM2012
L859	9965 100 03283	ACM2012 90Ω/400mA
L900	9965 000 43818	0.10µH 10%
L900	9965 100 02875	Ind. 0.1 uH 10%
L901	9965 000 43818	0.10µH 10%
L901	9965 100 02875	Ind. 0.1 uH 10%
L902	9965 000 43818	0.10µH 10%
L902	9965 100 02875	Ind. 0.1 uH 10%



D101	9965 000 44010	BAS316
D101	9965 100 02823	BAS316
D101	9965 100 03400	BAS316
D102	9965 000 44010	BAS316
D102	9965 100 03400	BAS316
D103	9965 000 44005	PDZ18B
D103	9965 000 44009	BZX384-C18
D103	9965 100 02824	BZX384-C18
D103	9965 100 02825	PDZ18B
D103	9965 100 03268	BZX384-C18
D104	9965 000 44004	BZX384-C5V6
D104	9965 100 02826	BZX384-C5V6 SOD-323
D104	9965 100 02827	PDZ5.6B
D104	9965 100 03271	PDZ5.6B
D150	9965 100 02828	SB240
D151	9965 000 44003	BAV103
D151	9965 100 02829	BAV103
D151	9965 100 02830	BAV103
D151	9965 100 03272	BAV103
D151	9965 100 03273	BAV103
D350	9965 000 37405	BAS32L
D350	9965 100 02831	LL4148 GS08
D350	9965 100 03321	LL4148-GSO8
D350	9965 100 03327	BAS32L
D351	9965 100 02831	LL4148 GS08
D351	9965 100 03321	LL4148-GSO8
D351	9965 100 03327	BAS32L
D352	9965 100 02831	LL4148 GS08
D352	9965 100 03321	LL4148-GSO8
D352	9965 100 03327	BAS32L
D401	9965 100 02831	LL4148 GS08
D401	9965 100 03321	LL4148-GSO8
D401	9965 100 03327	BAS32L
D700	9965 000 44010	BAS316
D700	9965 100 03400	BAS316
D701	9965 000 44010	BAS316
D701	9965 100 03400	BAS316
D702	9965 100 02831	LL4148 GS08
D702	9965 100 03321	LL4148-GSO8
D702	9965 100 03327	BAS32L
D703	9965 100 02831	LL4148 GS08
D703	9965 100 03321	LL4148-GSO8
D703	9965 100 03327	BAS32L
D704	9965 100 02831	LL4148 GS08
D704	9965 100 03321	LL4148-GSO8
D704	9965 100 03327	BAS32L
D705	9965 100 02831	LL4148 GS08
D705	9965 100 03321	LL4148-GSO8
D705	9965 100 03327	BAS32L
D725	9965 100 02831	LL4148 GS08

D725	9965 100 03321	LL4148-GSO8
D725	9965 100 03327	BAS32L
D726	9965 100 02831	LL4148 GS08
D726	9965 100 03321	LL4148-GSO8
D726	9965 100 03327	BAS32L
D760	9965 000 44015	SM240A DO-214AC
D760	9965 100 02832	SM240A DO-214AC
D800	9965 100 02831	LL4148 GS08
D800	9965 100 03321	LL4148-GSO8
D800	9965 100 03327	BAS32L
D801	9965 100 02831	LL4148 GS08
D801	9965 100 03321	LL4148-GSO8
D801	9965 100 03327	BAS32L



Q10	9965 000 45107	2N7002E-T1-E3 (60V)
Q100	9965 000 37398	SI5441DC
Q101	9965 100 02840	SI4936ADY SO-8
Q102	9965 100 02840	SI4936ADY SO-8
Q103	9965 000 42648	BC847C
Q103	9965 000 42649	BC847C
Q103	9965 100 02430	BC847C SOT-323
Q103	9965 100 02841	BC847C
Q103	9965 100 03458	BC847C
Q104	9965 100 02842	BC817-25
Q104	9965 100 03287	BC817-25 500mA/45V
Q105	9965 000 42648	BC847C
Q105	9965 000 42649	BC847C
Q105	9965 100 03458	BC847C
Q106	9965 000 42648	BC847C
Q106	9965 000 42649	BC847C
Q106	9965 100 03458	BC847C
Q107	9965 100 02843	PHD38N02LT
Q107	9965 100 02844	PHD36N03LT
Q108	9965 000 37397	MUN2211J
Q108	9965 000 42211	PDTCT114EK SC-59
Q109	9965 100 02845	SI3441BDV
Q11	9965 000 45107	2N7002E-T1-E3 (60V)
Q110	9965 000 42648	BC847C
Q110	9965 000 42649	BC847C
Q110	9965 100 03458	BC847C
Q111	9965 000 42211	PDTCT114EK SC-59
Q111	9965 100 02846	MUN2211TIG
Q12	9965 000 44111	PMBS3904
Q13	9965 000 44111	PMBS3904
Q14	9965 000 45107	2N7002E-T1-E3 (60V)
Q15	9965 000 45107	2N7002E-T1-E3 (60V)
Q150	9965 000 37398	SI5441DC
Q151	9965 000 42648	BC847C
Q151	9965 000 42649	BC847C
Q151	9965 100 03458	BC847C
Q152	9965 000 37397	MUN2211J
Q153	9965 000 37397	MUN2211J
Q153	9965 000 42211	PDTCT114EK SC-59
Q154	9965 000 37397	MUN2211J
Q154	9965 000 42211	PDTCT114EK SC-59
Q16	9965 000 45107	2N7002E-T1-E3 (60V)
Q17	9965 000 45107	2N7002E-T1-E3 (60V)
Q2	9965 000 44111	PMBS3904
Q20	9965 000 45107	2N7002E-T1-E3 (60V)
Q201	9965 000 36033	RK7002
Q201	9965 000 42651	2N7002
Q201	9965 100 02428	RK7002
Q201	9965 100 03293	RK7002
Q202	9965 000 36033	RK7002
Q202	9965 000 42651	2N7002
Q202	9965 100 03293	RK7002
Q21	9965 000 45105	AF9435PSLA (30V/5.7A)
Q21	9965 000 45106	SI9435BDY-T1-E3(30V)
Q22	9965 000 44111	PMBS3904
Q24	9965 000 45105	AF9435PSLA (30V/5.7A)
Q24	9965 000 45106	SI9435BDY-T1-E3(30V)
Q25	9965 000 44111	PMBS3904
Q26	9965 000 44111	PMBS3904
Q28	9965 000 44111	PMBS3904
Q3	9965 000 44111	PMBS3904
Q30	9965 000 44111	PMBS3904
Q351	9965 000 40045	MMBT3904
Q351	9965 100 02847	MMBT3904 200mA/40V
Q351	9965 100 03497	MMBT3904
Q353	9965 000 40045	MMBT3904
Q353	9965 100 03497	MMBT3904
Q601	9965 000 45107	2N7002E-T1-E3 (60V)
Q602	9965 000 45107	2N7002E-T1-E3 (60V)
Q603	9965 000 45107	2N7002E-T1-E3 (60V)
Q604	9965 000 45107	2N7002E-T1-E3 (60V)
Q605	9965 000 45107	2N7002E-T1-E3 (60V)
Q612	9965 000 44111	PMBS3904
Q613	9965 000 45107	2N7002E-T1-E3 (60V)
Q7	9965 000 44111	PMBS3904
Q700	9965 000 42648	BC847C
Q700	9965 000 42649	BC847C

Q700	9965 100 03458	BC847C
Q701	9965 000 42648	BC847C
Q701	9965 000 42649	BC847C
Q701	9965 100 03458	BC847C
Q704	9965 100 02845	SI3441BDV
Q761	9965 000 43944	BC847BW 100mA/45V
Q761	9965 100 02848	BC847BW 100mA/45V
Q761	9965 100 03294	BC847BW 100mA/45V
Q762	9965 000 43944	BC847BW 100mA/45V
Q762	9965 100 03294	BC847BW 100mA/45V
Q8	9965 000 44111	PMBS3904
Q801	9965 100 02849	BC857BW
Q801	9965 100 03295	BC857BW 100mA/50V
Q802	9965 000 43944	BC847BW 100mA/45V
Q802	9965 100 03294	BC847BW 100mA/45V
Q850	9965 000 40045	MMBT3904
Q850	9965 100 03497	MMBT3904
Q851	9965 000 40045	MMBT3904
Q851	9965 100 03497	MMBT3904
Q9	9965 000 44111	PMBS3904
Q900	9965 000 42648	BC847C
Q900	9965 000 42649	BC847C
Q901	9965 100 02845	SI3441BDV
U1	9965 000 45083	CAS-220/C
U10	9965 000 45101	NC7WZ14P6X
U100	9965 000 43937	TPS5430DDAR
U100	9965 000 44828	TPS5420DRG4
U100	9965 100 02850	TPS5430DDAR
U100	9965 100 03298	
U101	9965 000 43942	NCP5422AD
U101	9965 100 02851	NCP5422AD
U102	9965 000 43929	TS431AIL
U102	9965 100 02852	TS431AIL
U11	9965 000 44123	24LC02BT
U12	9965 000 45089	ZR39661BGCG
U13	9965 000 45097	SN74CBT3257CPWR
U15	9965 000 45096	NC7SB3157P6X
U150	9965 000 42209	AME1117CCGTZ
U150	9965 000 42624	LD1117S33 SOT-223
U150	9965 000 42747	LD1117S33 SOT-223
U151	9965 000 42209	AME1117CCGTZ
U151	9965 000 43930	LD1117DT33TR
U151	9965 100 02853	LD1117DT33TR
U152	9965 000 42209	AME1117CCGTZ
U152	9965 000 42624	LD1117S33 SOT-223
U152	9965 000 42747	LD1117S33 SOT-223
U153	9965 000 43935	AP1117ELA-ADJ
U153	9965 100 02854	LD1117S-TR
U153	9965 100 02855	AP1117ELA-ADJ
U154	9965 000 43935	AP1117ELA-ADJ
U154	9965 100 02854	LD1117S-TR
U154	9965 100 02855	AP1117ELA-ADJ
U155	9965 000 43937	TPS5430DDAR
U156	9965 000 43935	AP1117ELA-ADJ
U156	9965 000 43937	TPS5430DDAR
U156	9965 000 44828	TPS5420DRG4
U156	9965 100 02850	TPS5430DDAR
U156	9965 100 02855	AP1117ELA-ADJ
U156	9965 100 03298	AP1117E
U16	9965 000 45093	AP1117E33LA
U16	9965 000 45103	AT1117
U17	9965 000 45097	SN74CBT3257CPWR
U18	9965 000 45088	MST9883C-LF-140
U19	9965 000 45097	SN74CBT3257CPWR
U2	9965 000 45091	AIC1084PE
U2	9965 000 45092	AP1084DLA
U2	9965 000 45102	AT1084
U20	9965 000 45108	S29AL032D90TF1030
U20	9965 100 05643	MX29LV320CTTC
U21	9965 000 45100	74LVC1G126GW
U23	9965 000 45087	V58C2256164SCI6
U23	9965 100 05642	M13S2561616A
U24	9965 000 45087	V58C2256164SCI6
U24	9965 100 05642	M13S2561616A
U25	9965 000 45094	DS1233AZ-10
U250	9965 000 43932	MT5112BD
U250	9965 100 02856	MT5112BD
U26	9965 000 45093	AP1117E33LA
U26	9965 000 45103	AT1117
U27	9965 000 44123	24LC02BT
U28	9965 000 45099	WT6701F_S20
U29	9965 000 45097	SN74CBT3257CPWR
U3	9965 000 45091	AIC1084PE
U3	9965 000 45092	AP1084DLA
U3	9965 000 45102	AT1084
U30	9965 000 45086	MSP4440K
U301	9965 000 43933	MT5371AJ
U301	9965 100 02857	MT5371AJ PBGA-588
U32	9965 000 45091	AIC1084PE
U32	9965 000 45092	AP1084DLA
U32	9965 000 45102	AT1084
U33	9965 000 45098	TPA6110A2DGNRG4
U34	9965 000 45085	TPA3101D2RGZR
U353	9965 000 44035	AT24C32AN-10SU-2

U353	9965 000 44284	M24C32-WMN6TP
U37	9965 000 45091	AIC1084PE
U37	9965 000 45092	AP1084DLA
U37	9965 000 45102	AT1084
U38	9965 000 45091	AIC1084PE
U38	9965 000 45092	AP1084DLA
U38	9965 000 45102	AT1084
U4	9965 000 45091	AIC1084PE
U4	9965 000 45092	AP1084DLA
U4	9965 000 45102	AT1084
U41	9965 000 45101	NC7WZ14P6X
U42	9965 000 45100	74LVC1G126GW
U501	9965 000 43940	HY5DU561622ETP-5
U501	9965 100 02859	HY5DU561622ETP-5
U501	9965 100 03307	HY5DU561622ETP-5
U502	9965 000 43940	HY5DU561622ETP-5
U502	9965 100 02859	HY5DU561622ETP-5
U502	9965 100 03307	HY5DU561622ETP-5
U503	9965 000 43934	LP2996MRX
U503	9965 100 02860	LP2996MRX
U6	9965 100 05641	CAT6341
U601	9965 000 45095	MP1410ES-C019-LF-Z
U603	9965 000 45091	AIC1084PE
U603	9965 000 45092	AP1084DLA
U603	9965 000 45102	AT1084
U604	9965 000 44123	24LC02BT
U7	9965 000 45091	AIC1084PE
U7	9965 000 45092	AP1084DLA
U7	9965 000 45102	AT1084
U700	9965 000 44049	TMD5 341APFCRG4
U700	9965 100 02861	TMD5341APFCRG4
U701	9965 000 35965	M24C02-WMN6TP
U701	9965 000 42647	AT24C02BN-10SU-1.8
U701	9965 000 43941	M24C02-WMN6TP
U701	9965 100 08599	AT24C02BN
U702	9965 000 35965	M24C02-WMN6TP
U702	9965 000 42647	AT24C02BN-10SU-1.8
U702	9965 000 43941	M24C02-WMN6TP
U702	9965 100 08599	AT24C02BN
U703	9965 000 43938	TS5A3157DCKRE4
U703	9965 100 02862	TS5A3157DCKRE4
U703	9965 100 02863	NLASB3157DFT2G
U725	9965 000 35965	M24C02-WMN6TP
U725	9965 000 42647	AT24C02BN-10SU-1.8
U725	9965 000 43941	M24C02-WMN6TP
U725	9965 100 08599	AT24C02BN
U760	9965 000 43936	WM8776SEFT/R
U760	9965 100 02864	WM8776SEFT/R
U801	9965 000 44600	TDA8932T
U801	9965 100 02865	TDA8933T
U801	9965 100 03313	TDA8932T
U9	9965 000 45101	NC7WZ14P6X
U900	9965 000 43938	TS5A3157DCKRE4
U900	9965 100 02862	TS5A3157DCKRE4
U900	9965 100 02863	NLASB3157DFT2G
U901	9965 000 42637	74HC4052D PHILIPS
U901	9965 100 02866	74HC4052D
U902	9965 000 44786	AD8188ARU
U902	9965 100 02867	AD8188ARU
U903	9965 000 43935	AP1117ELA-ADJ
U903	9965 100 02854	LD1117S-TR
U903	9965 100 02855	AP1117ELA-ADJ

Side AV Panel [SA]

Various

SW0201 9965 100 02882 Tact Switch

—||—

C0201	9965 000 43985	1μF 20% 16V
C040	9965 000 42690	47pF 50V NPO 5% 0603
C041	9965 000 42231	330pF 50V NPO 0603
C042	9965 000 42231	330pF 50V NPO 0603
C043	9965 000 42231	330pF 50V NPO 0603
C044	9965 000 42231	330pF 50V NPO 0603
C045	9965 000 42690	47pF 50V NPO 5% 0603
C046	9965 000 42690	47pF 50V NPO 5% 0603
C049	9965 000 42722	6n8 50V X7R 0603
C050	9965 000 42722	6n8 50V X7R 0603
CN041	9965 000 43811	RCA Jack 1*3 Y/W/R
CN041	9965 000 43812	RCA Jack 1*3 Y/Wh/Rd
CN042	9965 000 43813	Mini Jack 4p Bk
CN042	9965 000 43814	Mini Jack 4p
CN043	9965 000 43816	Phone Jack 3.5mm 7p Bk
CN043	9965 100 03712	Phone JACK 3.5mm bl

—W—

R0201 9965 000 42662 330Ω 5% 1/10W

R0202	9965 000 42218	220Ω 5% 1/10W
R0203	9965 000 42225	4.7kΩ 5% 1/10W
R0204	9965 000 42214	10kΩ 5% 1/10W
R0205	9965 000 42225	4.7kΩ 5% 1/10W
R0206	9965 000 42225	4.7kΩ 5% 1/10W
R040	9965 000 43336	75Ω 5% 1/10W
R041	9965 000 40053	1KΩ 1/10W 5%
R042	9965 000 42221	27kΩ 5% 1/10W
R043	9965 000 40053	1KΩ 1/10W 5%
R044	9965 000 42221	27kΩ 5% 1/10W
R045	9965 000 43336	75Ω 5% 1/10W
R046	9965 000 43336	75Ω 5% 1/10W
R047	9965 000 42212	0Ω 5% 1/10W
R048	9965 000 42212	0Ω 5% 1/10W

—W—

L040	9965 000 43818	0.10μH 10%
L040	9965 100 02875	Ind. 0.1 uH 10%
L040	9965 100 02876	0.1 uF 10%
L041	9965 000 43818	0.10μH 10%
L041	9965 100 02875	Ind. 0.1 uH 10%
L042	9965 000 43818	0.10μH 10%
L042	9965 100 02875	Ind. 0.1 uH 10%
LED0201	9965 000 42729	L-3WSYKPBW

—E—

Q0201	9965 000 42649	BC847C
Q0201	9965 100 02479	BC847C
Q0202	9965 000 42649	BC847C
Q0202	9965 100 02479	BC847C
Q0203	9965 000 37785	BC857CG
Q0203	9965 000 40046	BC857 SOT23
Q0203	9965 000 43378	BC858CLG
U0201	9965 000 42727	TSOP34136SB1

11. Revision List

Manual xxxx xxx xxxx.0

- First release.

Manual xxxx xxx xxxx.4

- 26MD357B/37 added.
- 26MF337B/27 added.
- 32MD357B/37 added.
- 32MF337B/27 added.
- 37MF337B/37 added.
- 37PFL5332D/37 added.
- 42MF337B/37 added.

Manual xxxx xxx xxxx.5

- **Chapter 10:** Spare parts list added.